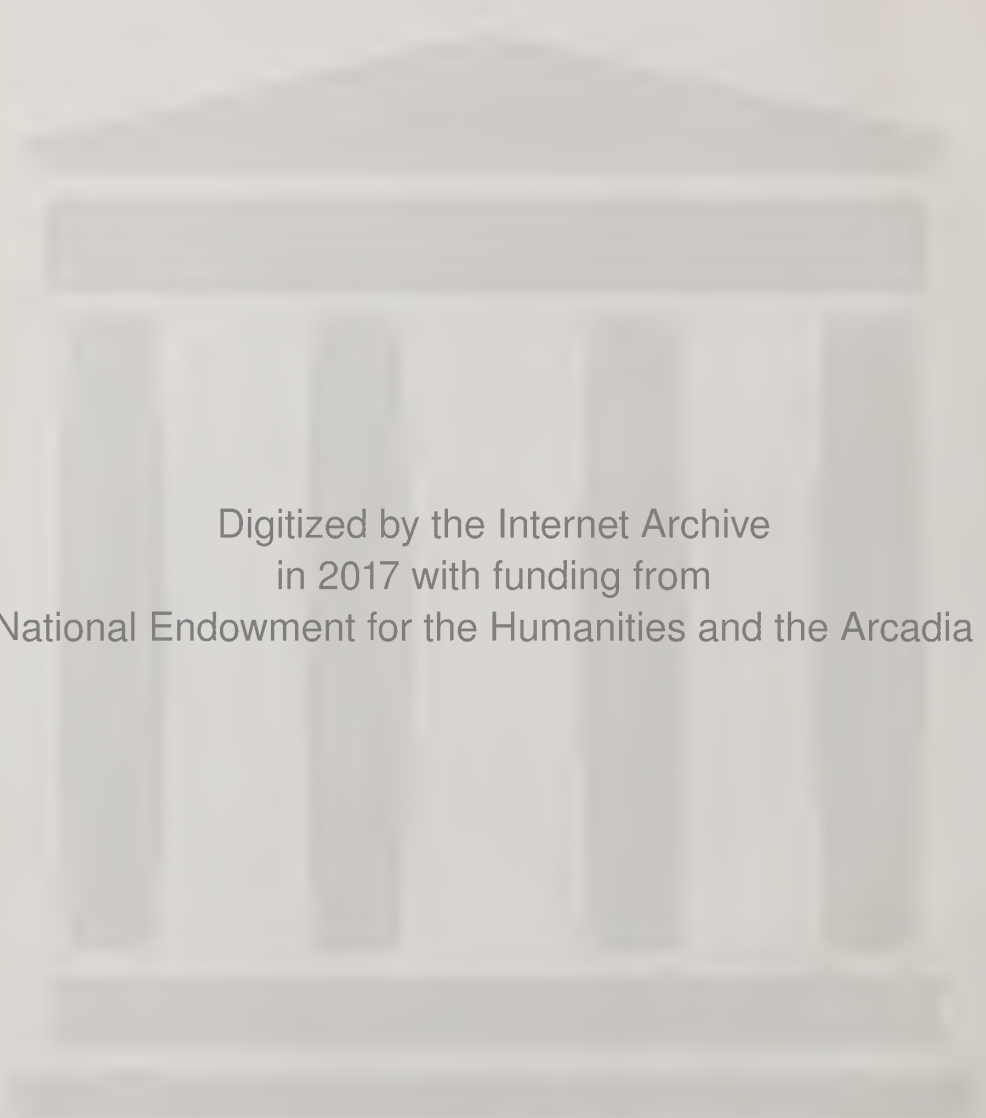


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RETROVERSION OF THE UTERUS FACTORS IN ITS PRODUCTION*

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Retroversion of the uterus is still an interesting and unsettled problem. Its mode of production has never been fully understood, and symptoms, presumably caused by the condition, still lack proof of origin. Prevailing views concerning its symptomatology and treatment are widely divergent and far from consistent. By some the displacement is completely ignored as a cause of pelvic symptoms, while others give it a place of considerable gynecologic importance. Either view may be correct in specific instances. Careful study, however, of the etiologic factors and intrinsic changes occurring in the uterus as a result of the displacement fails to justify either extreme. Obviously, only by thorough understanding and complete knowledge of the factors involved in its production and pathologic changes incident to the displacement, can we hope to achieve unanimity of opinion concerning symptoms actually produced, and preferred treatment.

Congenital Retroversion: No discussion of this subject is complete without consideration of the term "congenital retroversion." Synchronous with the tendency to minimize the significance of retroversion is seen an increasing avidity for the use of the term "congenital." Physicians in increasing numbers are dismissing the lesion as a cause of pelvic symptoms by classifying it as congenital and thus considering the matter settled. In our opinion this is not justified. We are not willing to accept the existence of such a condition in normal individuals at birth, and we believe that use of the term in this connection is both incorrect and misleading.

At birth, the uterus is an abdominal organ and lies above the pelvic brim. It measures about three centimeters in length and lies opposite the fifth lumbar vertebra.¹ As gradual development

of the pelvic organs occurs, it assumes a lower level and by the sixth year of life is only slightly higher than the normal adult uterus. At birth, the long axis of the uterus is practically parallel to the long axis of the body, the organ gradually assuming its horizontal forward position before puberty. With these facts in mind, the use of the term "congenital" in speaking of retroversion is obviously incorrect. Since all retroversions are acquired in type, the term "simple retroversion" may be used as conveniently differentiating the uncomplicated retroversion from that associated with childbirth injuries or diseases of the pelvic organs.

In considering the causes of simple uncomplicated retroversion, it must be remembered that factors which in themselves appear insignificant, may, when acting with others, seemingly just as unimportant, result in a force sufficiently powerful to bring about displacement of the uterus, a fact which should be kept in mind in order to evaluate properly the possible causes to be enumerated.

Full Bladder: Due to the intimate anatomic relationship between bladder and uterus, the former, when distended, acts like a tumor of the anterior wall of the uterus and causes it to assume an upright position. (Figure 1.) Variations in size of the bladder make it difficult to estimate the



Fig. 1. Showing the effect of a full bladder on position of the uterus.

importance of this factor. With the individual lying on her back and the bladder distended, it is easy to see how the uterus may be forced from its forward location, and rendered more susceptible to other displacing forces. Once in the vertical position, the bowel may come to lie in front of the uterine body, and in so doing not only tends to maintain but also increase the uterine displacement.

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Full Rectum: In order to understand better the part played by the rectum in causing retroversion, it is necessary to recall certain anatomic facts regarding this structure. According to Piersol,² the rectum begins at the third sacral vertebra and passes down along the hollow of the sacrum for about five inches, terminating in the anal canal at the pelvic floor. It does not exhibit the pouching seen in the colon but does present three different sacculations when distended. The lowermost is called the ampulla and may be as much as nine inches in circumference. In the female, this sacculatation lies against the posterior wall of the vagina at the level of the cervix. Since the bony sacrum prevents expansion of the rectum posteriorly, any dilatation must necessarily exert its force against the posterior wall of the vagina, and thus, due to the attachment of the vagina and cervix, indirectly influence the position of the uterus. Pressure forward on the posterior vaginal wall tends to pull the cervix down and forward so that the body of the uterus rotates on its transverse axis, assuming a posterior position. (Figure 2.) Dilatation of the upper portion of the rectum does



Fig. 2. Showing effect of distended rectum on position of the uterus. Due to the sacrum any dilatation of the rectum must occur in a forward or lateral direction.

not prevent this rotation since it lies lateral to the body of the uterus and in a higher and larger portion of the pelvis. Distention of the lower rectum, therefore, may make this viscus an important factor in the production of retroversion. Clinically, constipation must be considered in this connection.

Loss of Pelvic Support: It will be recalled that the principal supporting structures of the uterus are the muscles and fascias constituting the pelvic floor. While the ligaments aid in maintaining the uterus in its normal position, they play a relatively unimportant part in supporting the organ. Any weakness or relaxation of the pelvic floor, either acquired or congenital, permits a lowering of the uterus. As it descends the body of the uterus can no longer maintain its usual relation with the surrounding structures and consequently assumes an upright position. (Figure 3.) The pubic bones and bladder prevent a parallel lowering of the upper portion of the uterus and as the organ descends the fundus tends to describe an arc posteriorly. While the descensus is the essential thing, the altered position of the uterus renders



Fig. 3. Illustrating effect of weakened pelvic floor on position of uterus. As sagging of pelvic floor increases the horizontal axis of the uterus is lowered causing the body of the uterus to assume a more upright position.

it more vulnerable to other factors predisposing to backward displacement.

Intra-Abdominal Pressure: Intra-abdominal pressure is subject to considerable variation. It is positive on inspiration, coughing and sneezing, and negative, or diminished, on expiration. Normally, these variations have a desirable effect upon the circulation by aiding flow of blood through the large veins of the abdomen. Positive intra-abdominal pressure also helps maintain the uterus in its normal position. Generally speaking, the abdominal cavity can be compared with a closed cylinder and the intra-abdominal pressure may be said to conform to the laws governing fluid pressure. Of course, this application must be exceedingly general since there is in the abdomen and pelvis a mixture of solids, liquids, and gases. In the normal upright individual, then, with the uterus in a horizontal position and supported at its transverse axis by a normal pelvic floor, these variations in intra-abdominal pressure aid in keeping the uterus forward. (Figure 4.) When, however, there is a loss of pelvic support as a result of

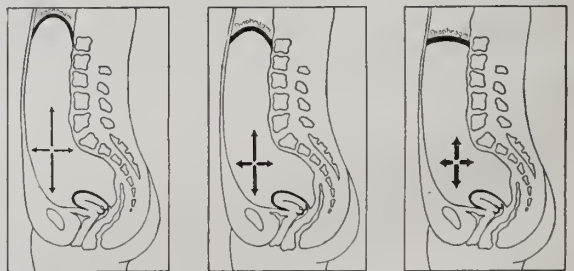


Fig. 4. In the normal, healthy individual with good pelvic floor support, intra-abdominal pressure tends to maintain the uterus in its forward position.

congenital weakness or acquired relaxation these circumstances no longer prevail and the weak uterine supports, failing to withstand the variations in intra-abdominal pressure, permit downward and backward displacement of the uterus. (Figure 5.) As it assumes a vertical position the organ becomes more and more susceptible to variations in pressure, until finally the force which normally helped maintain the uterus in its forward position becomes a factor in causing displacement. The more nearly the long axis of the uterus parallels

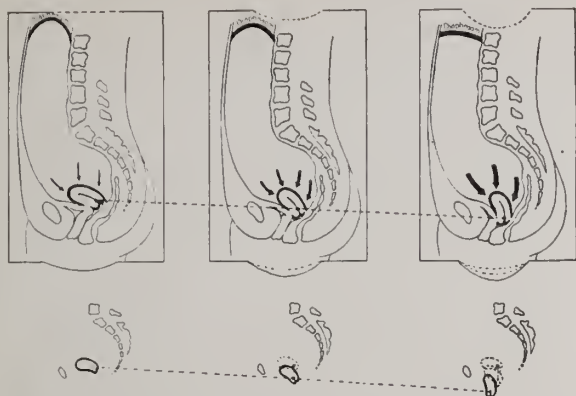


Fig. 5. When the pelvic floor is weakened as a result of injury or congenital weakness the positive variations in intra-abdominal pressure tend to force the uterus down. As descensus occurs the body of the uterus assumes an upright position, and, as the long axis of the uterus parallels the long axis of the body it becomes more susceptible to the detrimental effects of intra-abdominal pressure.

the long axis of the vagina, the more susceptible it becomes to positive changes in intra-abdominal pressure. The fact that marked descensus is not seen more frequently as a result of this force can be explained on the basis that sagging or relaxation of the supporting structures, while sufficient to allow backward displacement, is not enough to permit actual prolapse. So long as the abdominal wall and pelvic floor continue to give efficient support no untoward effect is noted from these changes, but when conditions are altered, factors normally helpful become detrimental and active in causing uterine descent and retrodisplacement.

Pelvic Inclination: For years we have been interested in the possible relationship between the tilt or inclination of the pelvis and common gynecologic conditions, particularly retroversion and prolapse. Since the depth of the lumbar curve of the spine generally varies as does the angle of pelvic inclination, our first study was based on the relationship between this curve and retroversion. (Figure 6.) Using the depth of the curve as an index of pelvic tilt, 1008 gynecologic patients were

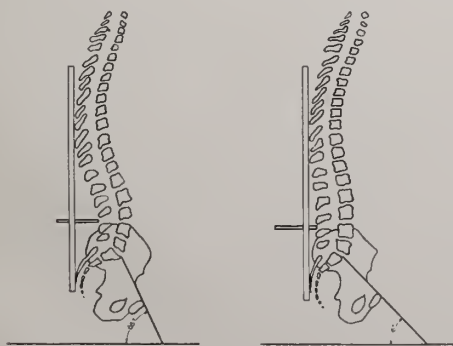


Fig. 6. Decrease in the curvature of the lumbar spine generally means a decrease in the angle of pelvic inclination.

studied. Theoretically an intimate association between the angle of pelvic tilt and retroversion of the uterus is to be expected. (Figure 7.) Mechanically, this relationship seems clear; yet the results from our earlier studies were not convincing. In the 1008 gynecologic patients observed, the average depth of the lumbar curve was found to be 31 millimeters.* In this study there were 109 individuals with retroversion of the uterus, and 23 with prolapse. Fifty-nine retroversions occurred among the 577 women with a lumbar index below 31 millimeters, or 12 per cent. In the other 431 patients with a lumbar curve deeper than 31 millimeters, there were 51 retroversions, also 12 per cent. Fourteen of the prolapse cases occurred in the group with a lumbar index of 31 millimeters or less, or 2.4 per cent, while nine women with a lumbar index of 31 millimeters or more had prolapse of the uterus, or 2 per cent. This apparent paradox between theory and fact,

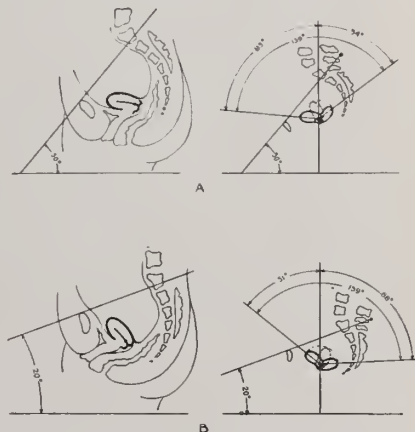


Fig. 7. (A) Normal angle of pelvic inclination, the long axis of the uterus is in a horizontal position. In order to become completely retroverted the top of the uterine fundus must pass through an arc of approximately 135 degrees, mostly "up hill."

(B) Low angle of pelvic inclination. Uterus describes the same arc in assuming the retroverted position but most of it is "down hill."

may perhaps, be explained on the basis that the lumbar index gives only a rough estimate of the actual pelvic tilt, and secondly, while pelvic tilt may be an important predisposing factor, it alone is not sufficient to bring about alteration in the position of the uterus.

Studies are now being carried on whereby the degree of the pelvic tilt is measured with an instrument especially devised for this purpose. (Figure 9.) Possibly a definite and convincing relationship will be demonstrable when this study is complete.

Gravity: Gravity is generally ignored as a factor of importance in the production of retrodisplacement. Certainly the healthy supporting structures are little affected by the weight of a

normal uterus. When, however, the supporting structures are weakened by congenital or acquired changes, as in the case of subinvolution, gravity can no longer be ignored. Under these circumstances, the weight of the uterus may be such as to cause definite descensus. The higher incidence of retroversion in puerperal women may be partly

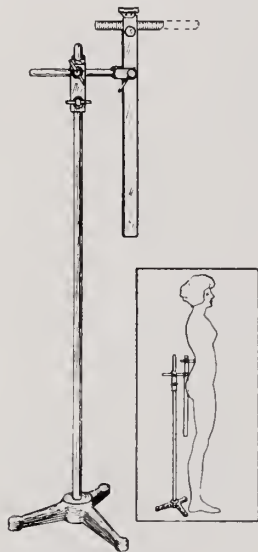


Fig. 8. Instrument devised by the author for measuring depth of lumbar curve.

* Two methods were utilized in obtaining these data. The first consisted in placing the edge of a yardstick along the patient's spine and measuring the depth of the curve at the junction of the last lumbar and first sacral vertebrae in millimeters. The second method consisted in using a special instrument devised so as to eliminate some of the obvious objections to the method described above. (See Figure 8.)

explained on this basis, although the responsibility must be shared by relaxation of the supporting structures incident to pregnancy and confinement.

Trauma: Trauma is seldom mentioned today as a cause of retroversion. Probably it has never been a common cause of this condition. That it may produce retroversion, however, is shown by the lucid report given by Marion Sims in the story of his life.³ Because of its historical interest we quote in detail:

"It was my usual habit to start off at nine o'clock to visit patients and I seldom had less than from eighteen to twenty visits to make in a morning. Just as I was starting off and about to get into my buggy a little negro came running to my office and said, 'Mass, Doctor, Mrs. Merrill done been throwed from her pony and is mighty badly hurt and you must come right down and see her, just as soon as you can get there.' So as this was a surgical case and not knowing whether it was a fractured limb or skull, I looked upon it as a case of emergency and instead of making my usual morning round I started up the hill three-quarters of a mile, to see Mrs. Merrill. She was not an old

woman but she was the wife of a dissipated old man who was supposed to be of not much account as he was carousing and leading an otherwise disreputable life. Mrs. Merrill, however, was a respectable woman who obtained a living by washing and taking in sewing and was most appreciated and respected among her neighbors. She was about forty-six years of age, stout and fat, and weighed nearly two hundred pounds. She had been riding along on a pony and when within about fifty yards of her own house, a hog lying by the roadside in the grass, jumped out and made a noise that frightened the pony, and it sprang from under the rider. She fell with all her weight on the pelvis. She had no broken bones. She was in bed, complaining of great pain in her back and a sense of tenesmus in both the bladder and rectum, the bearing-down making her condition miserable.

"If there was anything I hated it was investigating the organs of the female pelvis. But this poor woman was in such a condition that I was obliged to find out what was the matter with her. It was a digital examination, and I had sense enough to discover that there was a retroversion of the uterus. It was half turned upside down, and I took it for granted that this sudden dislocation, or disturbance of the pelvic organs was the result of the fall on the pelvis. The question was, what I should do to relieve her. I remembered when a medical student, in Charleston Medical College, that old Doctor Prioleau used to say: 'Gentlemen, if any of you are ever called to a case of sudden version of the uterus backward, you must place the patient on the knees and elbows—in a genupectoral position—and then introduce one finger into the rectum and another into the vagina, and push up, and pull down; and if you don't get the uterus in position by this means, you will hardly effect it by any other.' This piece of

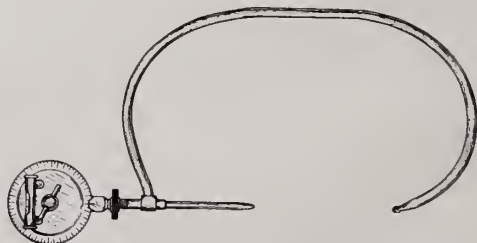


Fig. 9. Neumann and Ehrenfest kleisiometer, used in measuring angle of pelvic inclination.

information, at the time it was given, went into one ear and out at the other. I never expected to have any use for it. Strangely enough all that Professor Prioleau said came back to me at once when the case was presented. So I placed the patient as directed, with a large sheet thrown over her. I could not make up my mind to introduce

my finger into the rectum, because a few days before that I had had occasion to examine the rectum of a nervous gentleman who had a fissure, and he made so much complaint of the examination that I thought that this poor woman was suffering enough without my doing so disagreeable a thing. So, as she raised herself and rested on her knees, just on the edge of the bed, by putting one finger into the vagina, I could easily touch the uterus by my pushing, but I could not place it in position, for my finger was too short; if it had been an inch longer, I could have put the womb in place. So I introduced the middle and index fingers, and immediately touched the uterus. I commenced making strong efforts to push it back and thus I turned my hand with the palm upward, and then downward, and pushing with all my might, when all at once I could not feel the womb, or the walls of the vagina. I could touch nothing at all, and wondered what it all meant. It was as if I had put my two fingers into a hat, and worked them around, without touching the substance of it. While I was wondering what it all meant, Mrs. Merrill said, 'Why Doctor, I am relieved.' My mission was ended but what had brought the relief I could not understand. I removed my hand, and said to her, 'You may lie down now.' She was in a profuse perspiration from the pain and the unnatural position, and in part from the effort. She rather fell on her side. Suddenly there was an explosion, just as though there had been an escape of air from the bowel. She was exceedingly mortified and began to apologize, and said, 'I am so ashamed.' I said: 'That is not from the bowel, but from the vagina, and it has explained now what I did not understand before. I understand now what has relieved you, but I would not have understood it but for the escapement of air from the vagina. When I placed my fingers there, the mouth of the vagina was so dilated that the air rushed in and extended the vagina to its fullest capacity, by the natural pressure of fifty-five pounds to the square inch, and this conjoined with the position, was the means of restoring the retroverted organ to its normal place.'

Doubtless severe falls may cause retrodisplacement, but the relative infrequency of this lesion among our young women of today, in spite of their vigorous activity, places trauma exclusive of parturitional injuries in a role of minor importance as a cause of retroversion.

Changes in Length of Vaginal Walls: In considering the etiology of retrodisplacements one must not overlook the effects produced by shortening either the anterior or posterior vaginal wall. Thus the forward bulging or shortening of the

posterior vaginal wall in the case of rectocele may cause sufficient pull on the cervix to alter the position of the uterus. (Figure 10.) Also, since the attachment of the anterior vaginal wall to the



Fig. 10. Showing effect of changes in the vaginal wall upon the position of the uterus.

cervix is below the transverse axis of the uterus, it may be reasoned that sagging in this region as in the presence of a large cystocele, will, by pulling the cervix forward, predispose to backward displacement of the uterus. While these changes do not explain the occurrence of retroversion in nullipara, they might account for its greater frequency in parous women.

Senile Changes: Backward displacement of the uterus as a result of atrophic changes occurring in the generative organs at the time of menopause is so common as to be considered normal.

Faulty Posture: One need only consider the causes already mentioned to realize that faulty posture may play an important part in predisposing to uterine displacement. The relaxation of the abdominal wall, pelvic floor and other supporting structures due to poor muscle tone is a factor that cannot be ignored. Alterations in the thoracic and abdominal cavities plus the loss of muscle tone may decrease the beneficial variations in intra-abdominal pressure to the point where these changes actually become detrimental.

The rôle of "flat back" and consequent low pelvic tilt, as advocated by instructors in physical education for women, has already been pointed out. (Figures 6 and 7.) Further investigation in this connection may show that flat back not only predisposes to retroversion but may actually cause the condition. Indeed our own studies and the work of others⁴ strongly suggest the existence of such a cause and effect relationship.

Since a flat or straight back is included in the prevailing conception of good posture it must be stated that this is not in accord with our ideas on the subject. As gynecologists, fully conscious of the anatomic characteristics of the female pelvis and the parturitional stress and strain to which it may be subjected, we cannot unqualifiedly agree with the generally accepted concept of good posture. From our point of view the posture is purely secondary and it is the muscle tone that matters. Furthermore, in our opinion flat back with its

associated decrease in pelvic tilt is not only undesirable but may be distinctly harmful.

Pelvic Inflammatory Disease: Inflammatory disease of the internal generative organs may also play a part in causing backward displacement. This is particularly true in the more extensive forms of adnexal disease associated with pelvic peritonitis. As usual, Nature attempts to confine the process to the true pelvis by constructing a defensive barrier against its upward spread. The bowel, omentum, uterus, and adnexa are all used for this purpose. Due to the elaboration of a fibrinous exudate by the serous surfaces these structures become more or less adherent. Later, as involution and healing take place, the uterus, if not already displaced, may be drawn back into the pelvis by resulting adhesions and cicatrix formation. (Figure 11.) This of course does not imply that all adherent retroversions are produced in



Fig. 11. Involuting pelvic inflammatory disease. The contracting cicatrix formed in this process may be sufficient to cause displacement of the uterus.

this manner, since in many instances the uterus may have been retroverted long before onset of the inflammatory process.

Tumors: Sizable new-growths of the uterus or neighboring organs may also affect uterine displacement. Thus a leiomyoma (fibroid), especially if located in the anterior uterine wall, may, as it grows, force the uterus back into the pelvis. (Figure 12.) Tumors of the ovary, cervix, bladder and rectum may act in similar fashion, but in



Fig. 12. Fibroid tumor of the anterior uterine wall. As the tumor enlarges the body of the uterus is pushed back, rotating on its transverse axis, to assume a retroverted position.

the presence of such important pathology the displacement itself is usually a matter of trivial importance.

COMMENT

While symptomatology and treatment of retroversion does not come within the scope of this paper, brief mention must be made of the relationship existing between these points and factors

accounting for the displacement. There is reason to believe that the changes responsible for the displacement, more frequently than the displacement itself, underlie the symptom complex often associated with and generally attributed to the retroversion. Without knowledge of this relationship between causative factors and symptom complex it is impossible to grasp the rationale of successful treatment. In other words, *the retroversion as well as symptoms may one and all result from the same group of etiologic factors. Consequently replacement of the uterus without correction of factors responsible for its displacement, cannot be expected to bring relief except in so far as the symptoms are accentuated by the retroversion.* Perfectly obvious examples of this are the displacements caused by pelvic inflammatory disease and uterine tumors, where the symptoms are invariably caused by the complicating disease and not by the retroversion. The relationship holds, however, even in cases where the cause is less tangible. *This does not mean that the completely retroverted uterus may not of itself give rise to symptoms.* That it may do so as a result of the altered position as well as resulting intrinsic organic changes is not to be denied. Yet the thousands of symptomless retroversions indicate that such cause and effect relationship is not the rule. Persistence or recurrence of symptoms after replacement of the uterus is corroborating evidence in this respect. *In a sense the retroversion is an index of mechanical derangement and unless the responsible disturbances in body mechanics as well as the displacement are corrected, complete and permanent symptomatic relief cannot be expected.*

The relief of symptoms associated with uterine displacement then becomes a complex problem, in which mechanical replacement of the uterus may play but a minor part. All too frequently we are satisfied with simple reposition of the displaced organ and neglect correction of its underlying causes. Small wonder that the symptoms persist or recur after the patient again assumes her usual mode of living. If the uterus remains forward after surgical replacement the operation is considered a success and the reappearance of symptoms attributed to neuroses. The frequency of just such failures is ample proof of the futility of correcting the displacement without also giving careful attention to the responsible underlying factors.

Obviously surgery directed primarily toward correction of the retrodisplacement is never indicated until a symptom cause and effect relationship is proved. In most cases this may be accomplished by manual replacement of the uterus and use of an appropriate, properly fitting pessary to

keep the replaced organ in position. By so doing the role of the retroversion as a symptom producer can easily be determined and surgical intervention reduced to a minimum. Should the discomfort persist after keeping the uterus forward for several months it is clear that the pelvic symptoms are probably not due to the displacement and search must be continued until the responsible cause has been uncovered and corrected.

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Discussion

Dr. Robert Knott, Sioux City: Mr. Chairman and Members of the Society: It is a great pleasure to hear Dr. Miller's paper. He has brought out a dozen or so factors in the production of retroversion of the uterus. They are perfectly logical and obvious. One thing that I hope this paper will do is to decrease some of the surgery, that is, snap surgery, done on retroversion of the uterus.

I have in mind one woman who came into a doctor's office complaining of pain in the back. Routine examination disclosed a retroverted uterus. The examination stopped there. An operation was advised and done. The patient was not very sick when she came to the hospital, and the chart said she was well when she left, but a year later she was still walking around complaining of the same symptom. She was also called a neurotic. Anyone who would go through that without being called a neurotic would be remarkable. Somebody found that she was constipated. By putting her on a diet and taking care of the alimentary tract, she was entirely cured.

The next thing I want to emphasize is posture. It is significant that the specialist in orthopedics has cured many backaches simply by ordering lower heels on women's shoes. Not only that, but certain pelvic disturbances have also been cured at the same time. It is also significant that maternity services in many of the hospitals in this country are advising, and some are even insisting on exercises, notably the so-called monkey walk, for a month or two following delivery. They are doing this for the express purpose of avoiding or preventing retroversion of the uterus.

I have been asked to discuss Dr. Miller's paper but I do not think it needs discussion. I think it needs emphasis. It is certain that knowledge of the factors in the production of retroversion of the uterus is essential in any satisfactory treatment of the condition.

Dr. Emil C. Junger, Soldier: Gentlemen, to a general practitioner the subject of retroversion of the uterus is really of some consequence. The country is full of girls who have retroversion. Of course, they do not know what is the matter with them. They just have a lot of pain. Their periods are painful. They are getting to be neurotics, and they do not

know what is at the bottom of their trouble. They are being operated upon for appendicitis, and they are having every kind of adjustment done, or having all kinds of medicine poured down them, without finding what is wrong in the pelvis.

My people out there at Soldier are Scandinavians. If you have any people, girls or boys, anywhere that are any better developed physically, I should like to see them. The time is coming, however, and I have seen it in the last twenty-nine years that I have been in this Scandinavian locality, when the girls will have changed physically. They are not developing as they used to develop. We have a lot of things operating now that are producing a subnormal development in various ways, relaxation of tissues and parts, and lack of development, that we used not to have to contend with.

The factors that were mentioned by Dr. Miller of distended bladder and distended rectum, we could account for in days gone by when they used to build a little house on the back of the lot, in back of the big house, and they could not get to it in stormy weather, or they could not get to it at night. But why should we have that bowel or bladder distention now when we have two or three bathrooms in every house and when you can empty the bladder or rectum any time you desire? Alas, now we are getting so that we cannot have a bowel movement without calling a doctor or having a lot of help from drugs and syringes.

The pelvic floor is relaxed, every tissue is relaxed in our people nowadays, and the uterus falls down until it is within an inch of the introitus even in girls.

I do not know that in those conditions there is any special remedy to be recommended to get that retroverted uterus up. One thing I would caution you against is, telling those young girls, for the sake of themselves and their families, that they can't get pregnant, because if you do, they might possibly get reckless. If you want to tell them anything, tell them that pregnancy is easier, so you help them along morally at least.

We have a lot of reflex symptoms from retroversion. I have made trip after trip at midnight or any other time of the night, to see women and girls who thought they were choking. They thought they had a goiter or something in their throat, but it was a retroverted uterus. I have had people come to me complaining that they had consumption because they had pain in the chest, when they had a retroverted uterus. If you see somebody who is neurotic or complains of this, that and the other thing, of chronic appendicitis, of painful abdomen, of indigestion, of a cough, and of tightness in the throat, or a lot of other aches and pains, take a look into their pelvis or into the vagina anyway, feel in there first and look in if they will let you, and you will find a lot of things in the vagina or pelvis that need fixing.

I think I made my reputation by observing a few of these little things in a woman's pelvis, and I like them (the women).

Dr. Norman F. Miller (closing): I do not know

how much attention physicians pay to the teachings of the instructors in physical education, but it seems to me that we should not accept their teachings without certain reservations. The idea of physical education was originally developed for the male and then applied to the female without making allowance for anatomic differences nor for the stress and strain to which these pelvic structures are subject. An example is their advocacy of the flat back, which from the gynecologists' point of view can scarcely be considered desirable.

If this brief discussion of uterine displacements will make us think a little more about retroversions, particularly before operation is considered, then this paper will have accomplished its purpose.

COMPRESSED FRACTURES OF THE SPINE

"JACK" DECOMPRESSION*

ARCH F. O'DONOGHUE, M.D., F.A.C.P.,
Sioux City

The purpose of this paper is to attempt further to standardize and simplify the treatment of this type of fracture; which, because of the increase in industrial machinery and the use of the automobile, is becoming more frequent than in former years. The material on which this study is based is a series of 139 fractures of the spine which have occurred in 1,888 fracture cases observed in the five years ending April 1, 1931. Of the 139 fractures of the spine, sixty, or practically 45 per cent were the compressed type without primary cord injury. In this group of fractures observed in an average community, compression fractures of the spine comprised about 3.5 per cent of all fractures seen.

Very little is noted in earlier literature about this injury. X-ray equipment and technic prior to about 1915 was not good enough to allow detailed studies of the spine, especially in a lateral plane. Without such detailed study the diagnosis of a compressed fracture must remain vague.

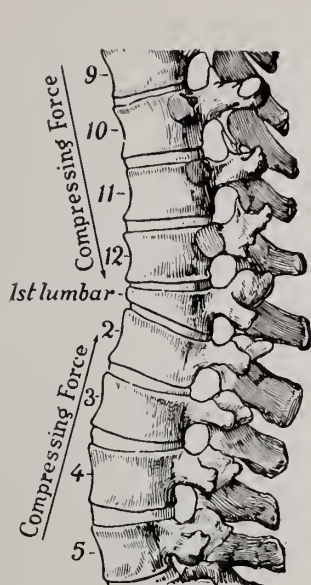
Kummel,¹ in his classic treatise in 1895, described a wedging of the vertebra in the back following injury which he thought to be an absorptive osteitis and did not recognize as a crush fracture. Texts on fractures prior to 1920 made little mention of the injury. It was not until 1917, when Hartwell² and later Brackett,³ et al, reported their cases, that the frequency of the fracture was realized and attempts to standardize treatment for it devised. Since that time there have been many excellent studies. Osgood⁴ in 1927 presented a classic description of the injury. He described treatment in recumbency on a convex frame to

bring about return of function. Eikenbary⁵ in the next year presented another treatise, also advising treatment on a convex frame or plaster shell. There have recently been several excellent papers. Huet,⁶ in 1929, stressed the frequent failure of diagnosis. Herzmark and Whitman,⁷ in 1929, described an adjustable convex frame. Harbaugh and Haggard,⁸ in 1930, presented a series of cases which had received various treatments, ranging from nothing to fusion operations, and estimated a high percentage of disability. Davis,⁹ in 1929, presented a treatise on the condition, advising hyperextension and demonstrating an adequate means of obtaining a fairly accurate reduction of the deformity. Our reason for presenting the subject to you again, in spite of this array of excellent work, is to point out the importance of early treatment and to demonstrate a simple method of securing reduction and immobilization.

In this series of sixty cases, ten seen in the past fifteen months have been treated by the method to be described. Our statistics of disability are based on the remaining fifty cases. In these we find the average age to be forty-seven. We find the percentage of males to be 72. The average disability in the fifty patients treated prior to January 1, 1930, who recovered sufficiently to return to work, was eleven months. We found however, that of this group of fifty, 28 per cent were still unable to return to work at the end of two years and should be classed as permanent disabilities. Some of this group received fusion operations; many, however, still complained of sufficient pain to keep them from working. Some of the group who were returned to work received fusion operations. Of the ten patients treated since January 1, 1930, by reducing the deformity in the method to be described, the average age was 45.7, a slightly younger age group, the males again predominating with a percentage of 70. In this group the average duration of disability was almost exactly six months, the longest being 8.4 months and the shortest 4.5 months. There have been no permanent disabilities in this group.

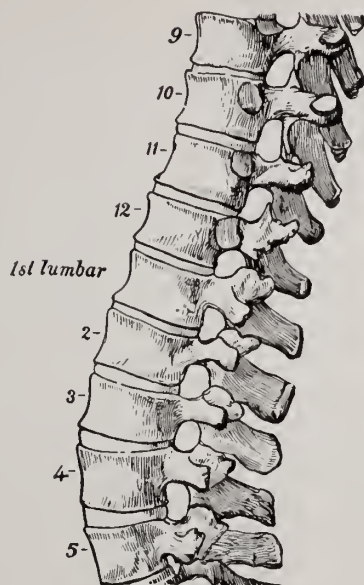
Causation of these fractures is jack-knifing of the spine. In the younger ages the spine is well protected against injury by the elasticity of the intervertebral discs which allow a marked degree of bending strain without undue stress to the body of the vertebrae. As age increases the elasticity of these discs decreases and bones become more highly calcified and brittle, reducing this margin of safety. In this series by far the larger percentage occurred in the eleventh and twelfth dorsal and the first and second lumbar vertebrae, although isolated cases occurred in almost the entire spine. The dorsal spine is well protected by the ribs and the lower lumbar spine by muscles so that most

* Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.



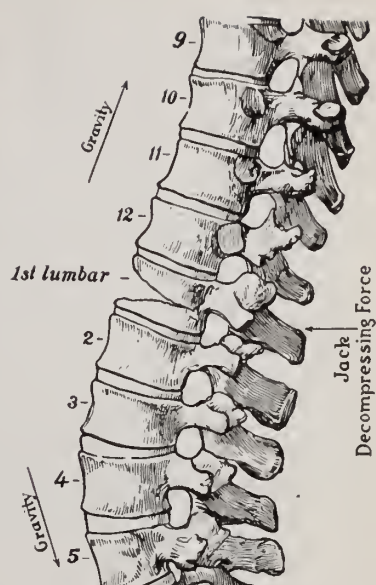
COMPRESSION

Fig. 1



NORMAL

Fig. 2



DE COMPRESSION

Fig. 3

fractures occur at the junction of the thoracic cage and the lumbar spine.

The question of diagnosis is an important one, as the lesions should be treated in the first two or three weeks. There is no positive way to make a diagnosis except by taking clear lateral x-rays in addition to stereoscopic anterior-posterior pictures. It is well to be on the lookout for this injury following any major trauma to the back. The most constant symptom is pain in the back. The most constant sign is muscle spasm. Occasionally a slight gibbus is present and often tenderness is found over the fractured vertebra. Less often, root pains give one the suspicion. Lateral x-rays will always make the diagnosis. If x-rays are taken immediately following injury in a patient who has not been up, the amount of compression may be slight and requires a careful measurement of the anterior border of the suspected vertebra for comparison with the anterior borders of the vertebrae above and below it to determine injury.

An ancient postulate in the treatment of fractures and dislocations is enforcing reduction by reversing the causative force. Here the causative

force is hyperflexion of the spine. Reduction should be accomplished by hyperextension of the spine. All modern writers agree that hyperextension will lessen deformity, eliminate pain and hasten healing. Davis⁹ has gone further and stated that sufficient hyperextension will reduce deformity completely and allow healing to take place in the cancellous body of the vertebra as rapidly, thoroughly and effectively as it will in fractures of other bones. There are factors in the anatomy of the spine which help in this maneuver. They are, first, the usual integrity of the anterior spinous ligament; second, the strong and firm attachment of the cartilaginous intervertebral discs to the bone; third, the posterior spinal joints and lamina are usually not fractured and are strong cortical bone. It is evident that if sufficient hyperextension is obtained the crushed bony body of the vertebra will be carried with the adherent intervertebral discs. It is further evident that hyperextension will be stopped when the normal limit is reached and that the posterior spinal joints and lamina will protect the cord.

The early method of obtaining hyperextension consisted in putting the patient on a convex frame allowing gravity slowly to dislocate the fractured areas, which is an excellent scheme and one which can still be used to advantage in some cases. This advantage has been increased by Whitman's⁷ adjustable convex frame which allows the amount of hyperextension on the frame to be gradually increased. The frame treatment undoubtedly is suited to some types of patient, the aged, the obese, patients in shock, and so forth. However, it has



Fig. 4. Taylor Kyphotone.

several decided disadvantages. Patients on frames cannot be kept entirely immobilized. They require careful and skillful nursing. They require hospitalization during the entire period of active treat-



Fig. 5. Hyperextension Method of Arthur Davis.

ment. A high degree of hyperextension on the frame is difficult to maintain, due to the sagging of the canvas and to the fact that the entire body of the patient must be kept in an extremely tiring position and because the point of fracture cannot be entirely fixed.

Davis⁹ describes another method of obtaining hyperextension, by reducing the fracture with the patient lying prone, the arms fixed to the top of the table, a sling applied to the feet and fastened to a block and tackle in the ceiling and the spine hyperflexed by lifting the patient's feet and pelvis clear of the table. A posterior plaster shell is then made and the patient turned over into it, where he remains for six or eight weeks during his convalescence. It is sometimes necessary in using this maneuver to dislocate the fragments by pressure over the kyphos if the deformity is severe. There is a disadvantage in this method. The pull on the

feet is the factor which disengages the fracture, gravity meanwhile tending to compress the posterior spinal articulations and the lamina. Although these structures usually are strong enough to resist buckling, it is possible for them to be cracked in combination with a crushed body and it is conceivable that occasionally, while we are decompressing the fractured body, we are going to cause compression of the posterior portion of the vertebra which might result in serious damage to the cord. It is for this reason that the following method is suggested.

Taylor,¹⁰ in 1900, described a method of obtaining hyperextension in children with Pott's disease by the use of a light machine which he called the kyphotome. The child lay on this while a double spica body cast was applied. This would not be practicable in the adult. The condition can be simulated, however, with any ordinary fracture table by using a jack with a removable platform as the decompressing force. In practice, the patient,



Fig. 7. Before and After Jack Decompression. Eight-week interval.

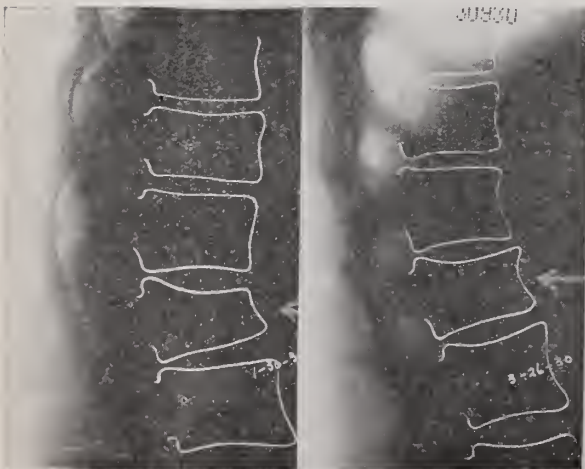


Fig. 6. Before and After Decompression. Eight-week interval.

either very lightly anesthetized or heavily narcotized, is placed on a fracture table and sewed into a heavy saddle-felt jacket. An aluminum plate two and one-half inches wide is placed up and down over the entire spine below the felt jacket, the feet bound to the foot posts and the table dropped. An ordinary automobile screw jack is then placed with its upper end resting exactly at the point of kyphos, and by slowly and steadily raising the jack, the desired amount of hyperextension can be obtained without noticeable discomfort to the patient and entirely without danger of injuring the cord, as the force of gravity is not only pulling the compressed body apart but is serving to exert a pull on both sides of the injured vertebra. When the desired position is obtained a double spica cast is applied from just above the knees high enough to include the lower thoracic cage. The cast is trimmed in the usual manner, or if it is thought advisable, the cast is bivalved and bound

to the patient with trunk straps so that he can be turned on his face for daily cleansing. We ordinarily treat such patients on a Bradford frame with a block and tackle at each end to allow the nurses to handle them. The first patients treated by this

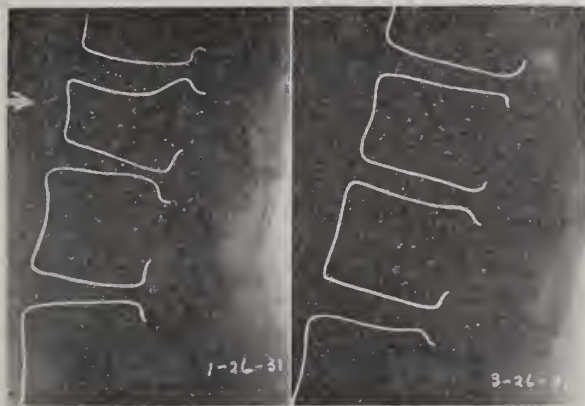


Fig. 8. Before and After Jack Decompression. Nine-week interval.

method were left in plaster for twelve weeks. At present the large plaster is removed in six or eight weeks, as healing seems firm then. The patient is allowed to sit up on the back rest practically as soon as the cast is off and allowed to be up and about with a Taylor brace at the end of ten weeks. The brace is discarded in twenty weeks to allow the muscles of the back to get in condition, so that at the end of six months, when consolidation of the bone is complete, he can return to work.

Since using this method our ideas of healing of compression fractures have undergone some change. We formerly thought that this fracture healed by producing a fusion between the body of the injured vertebra and the one above and below it, which might be called a bone bridge. This is a common observation. Sante and McCutcheon¹¹

found it in a series of 400 cases reported in 1925. Wallace¹² reported it in 1923 and other writers have noticed the same thing. In none of our ten cases have we observed any indications of the formation of bone bridges, the vertebra apparently being restored to normal as far as x-ray can determine.

It is our opinion that bone bridges form in compression fractures with deformity the same way that excess callus forms in other fractures with deformity and it is our further opinion that prolonged backache and disability of patients treated by simple recumbency, or untreated, may be due to the formation of this excess callus in the anterior portion of the vertebra.

SUMMARY

1. Compressed fractures of the spine are relatively common injuries.
2. Diagnosis is frequently overlooked.
3. The period of disability is cut down by hyperextension treatment.
4. Hyperextension can be obtained by the use of the convex frame; sling and shell or jack and cast.

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Discussion

Dr. Frank M. Keefe, Clinton: I am sure there is very little to discuss on this paper. It has been so ably presented, both by paper and picture, that it leaves very little argument. Dr. O'Donoghue certainly should be complimented upon his ingenious and simple method of reduction. Of course, we all know that many devices have been on the market in the past, in the way of tables and supports, to accomplish just what he has by a simple jack. This screw jack method of reduction is apparently a very simple one. The point that appeals to me is the fact that very little damage can be done in the reduction of depressed fractures.

In the early days we always had a fear of manipulating fractures of the spine, lest we do more damage than had already been done. In this high speed age of excellent highways, fast motor cars, plus our industrial work, this type of fracture is apparently becoming much more common.

A few years ago this only excited passing interest,



Fig. 9. Before and After Jack Decompression. Seven-week interval. Note also the posterior displacement of the fractured vertebra has been corrected by the application of Jack force.

but the general practitioner, the surgeon and the orthopedic surgeon as well, will have to deal with this particular type of fracture. When the doctor states that sixty cases out of 139 were of the compressed type without primary cord injury, you must realize that that is a rather high percentage, not to mention other types of depressed fractures where we have a compression of the cord, nerve root or ganglion injury.

The patients with whom we have to deal in industrial work, I find, are men along in years, possibly over forty and forty-five. They are generally in a hazardous occupation. They work at heights. The jack-knife hyperflexion of the spine is frequently due to a fall or a jump of thirty-five to forty feet, with the individual landing on his feet and forcing marked flexion. This, you know, will compress the anterior lip or the body of the vertebra in such a manner as to partially dislocate the intervertebral disc and break off a fragment of the anterior lip of the body of the vertebra. That, as you know, is commonly called a compressed or crushed fracture.

I have in the past treated these cases by the recumbent method, because it has proved quite satisfactory in my hands. You see the artistic work this young man has done in the application of the cast, and you can readily see how much easier it would be to place the patient in bed in the recumbent position, providing you can hold him there. That has been my difficulty. For that reason I think it is well to have something tangible like a brace or retention or halter and foot extension, to at least prevent his getting up. I have had such patients as Dr. O'Donoghue speaks of, and after the pain and spasm of the muscles have subsided, they will sneak out of the room and go to the toilet. After the shock and spasm have subsided they are apparently free from pain, but it is the after-care that brings the result we are looking after.

Of course, we all know what immobilization means, and what it means to the individual in the future, as far as deformity or disability is concerned. As I say, in the past I have favored the recumbent position for two or three weeks. In my industrial cases, I apply a cast for several weeks and about the twelfth week, a Taylor brace.

The diagnosis, of course, is always aided by our modern-day roentgenologist, and generally made by the lateral exposure. I am sure there are a great many of these cases that have been missed by improper technic in x-ray examination. Many of them have been treated as sprains, lumbago, spondylitis and so forth.

I should like to ask Dr. O'Donoghue a question as to the degree of pressure he exerts with the jack on the aluminum splint, because we all know that all spines are not perfect. We do not have that simple-looking italic "S" design. Some people are built with a marked lordosis and some with a marked kyphosis.

As his treatment applies to the dorsal and lumbar spine, I should like to ask how he estimates the degree of pressure, because if he has an individual suffering from a lordosis of the lower thoracic and lumbar region, if he over-exaggerates that position, he is

just as likely to have as much pain from an over-correction as from an under-correction. That is why I believe it is the accepted opinion that the recumbent method, with either the elevation of the foot of the bed or the elevation at the head of the bed is a hyper-extension in itself.

He has not mentioned in his paper whether these cases are checked through this very heavy cast and saddle-padding by subsequent x-ray negatives. We do not know what the result is going to be. Of course, it is my observation in the cases that have been treated by the recumbent method that there is very little kyphosis and very little deformity, hardly enough to be perceptible.

The advantage of this treatment, of course, is that immobilization, whatever it may be, means a lessening of pain. A cast of this kind means that the patient can be transported from the hospital to his home by train or by airplane. It lessens the hospitalization of the individual. Naturally, it lessens the cost, and the after-treatment can be taken care of by an ordinary, untrained attendant. Those are the advantages. Those of us who are interested in industrial and railway surgery in the practice of medicine are going to be confronted with more of these types of cases, that is, the simple depressed or compressed fracture, without cord or ganglion injury.

There are inquiries from the insurance companies as to when we are going to get these patients out of the hospital. In the future, instead of fighting the insurance companies, saying, "What do they know about our business," we must insist on some sort of cooperation with them. They know very little about anatomy and physiology and surgery. Whom are they going to seek for assistance or guidance? The surgeons or the physicians are the ones to whom they will be coming, and that is why we should endeavor to create some standard of treatment.

Dr. O'Donoghue has certainly established a standard, as far as depressed fractures are concerned, in the lower thoracic and lumbar region, and I feel that he has the disability down to weeks; that is, he claims that hyperextension should be done in the first two weeks of treatment; second, that the cast should remain from six to eight weeks, then removed; the application of a Taylor brace up until the twelfth or fifteenth week, and finally a discharge, in most of these cases, about the twentieth week. I presume that would be in the neighborhood of four to five months.

On the other depressed fractures, speaking of the cervical region, it has been accepted that they are treated by the halter method, by the elevation of the bed, or sandbags to the neck; some go so far as to manipulate.

The upper thoracic region is treated by hyper-extension either to the feet or to the neck or by the recumbent position. Dr. O'Donoghue comes along with a screw-jack method of reduction which to me is a very simple and practical one. I believe it is the first time it has been mentioned in literature and its simplicity is deserving of favorable comment.

Dr. Archibald F. O'Donoghue (closing): I want to thank Dr. Keefe for his discussion. There were a number of points which I did not mention, because of lack of time.

Dr. Keefe mentioned the fact that insurance companies are hurrying to get these patients back to work, and that is entirely true. I think it is wise in industrial cases that are covered by the compensation act to be very careful not to tell the patient he has a broken back, because if you do, he will hold out on the industrial commission for years. If you tell him he has a broken vertebra that is perfectly all right. If you tell him he has a broken back, it is just too bad. This does not refer to private patients, but to insurance cases.

The degree of hyperextension which you should get with the jack puzzled us a good deal at first. In the first case we treated I do not think we got enough hyperextension. I have since observed that as the anterior spinous ligament begins to tighten, the patient's buttocks start to leave the table, and you have then reached the proper degree of hyperextension. When this point is reached, we stop the hyperextension. It seems to be quite an accurate criterion.

I have tried to x-ray the patients laterally through the cast and thus far have been entirely unsuccessful. If hyperextension is brought to a point where the anterior spinous ligament is tight, and the buttocks start to leave the table, that fracture must be pulled out, and there is no way to check it as far as we have been able to discover until the cast is removed at the end of six to eight weeks.

Symposium: Gastric and Duodenal Ulcer

I. X-RAY SIGNS OF GASTRIC AND DUODENAL ULCER

H. C. BONE, M.D., Des Moines

Before entering upon the subject proper I feel that one should not fail to emphasize first some of the more important considerations in the technic of the fluoroscopic and roentgenographic examination. Those I wish to mention are:

1. The examination should be made on the fasting stomach.

2. The stomach should be examined fluoroscopically with the patient in both the upright and horizontal positions. The patient should be rotated in both lateral positions during this examination.

3. Every effort should be made to establish the constancy or inconstancy of any abnormality observed. This is especially true in doubtful cases, or where the findings are not clean-cut. This can often be done (a) by careful observation under the fluoroscope; (b) by re-examination with or without giving an antispasmodic to the physiologic limit; or (c) by making a series of plates, rather than relying on one or two or upon the fluoroscopic examination alone.

4. Observation of the emptying time of the stomach. This is very important in determining the functional ability of the stomach and in some instances furnishes the only information indicating that an organic lesion is present. In the presence of a six-hour retention, inquiry should always be made as to whether the patient is having a headache. Headache, especially if severe or of the migraine type, is frequently the cause of a six-hour retention in the stomach when no organic disease is present.

5. The examination should include both the fluoroscopic and roentgenographic work. Each method has its own particular advantages and by employing both, the roentgenologist may avoid error in his observations or his interpretation of findings.

These technical factors just mentioned are very important in making an accurate x-ray examination for gastric and duodenal ulcer.

The x-ray findings of gastric ulcer are commonly classified as the direct and indirect signs. The former, of course, are of greater diagnostic value than the latter. Of these direct signs we find:

1. *The niche.* The niche represents the visualized crater of a penetrating ulcer. It shows as a bud-like prominence on the outline of the stomach. Its size may vary from a small tip to 3 cm. or more in transverse diameter. It may be found in any portion of the stomach but appears most frequently on the lesser curvature or on the posterior wall near the lesser curvature. Observation of the stomach while filling, manual displacement of the barium and rotation of the patient, are procedures which often aid in locating an ulcer on the posterior wall. The findings most commonly mistaken for a true niche are the bulge or prominence between two peristaltic waves or the visualization of a loop of bowel protruding just above the lesser curvature. Careful observation, however, will prove that these are not constantly present and that they change in location. When a niche of large diameter is observed in a person over thirty-five years of age the possibility of carcinoma must always be considered. With this exception the observation of a true niche is almost diagnostic of gastric ulcer.

2. *The accessory pocket.* This occurs as a result of perforation of an ulcer and extension of the ulcerating process to adjoining structures, producing a cavity. It is visualized near the outlines of the stomach and the canal connecting it to the gastric cavity may or may not be seen. It is often more or less spherical in shape and retains barium when that in the stomach settles to the lower pole or even when the stomach is empty.

In the case of a niche very little or none of the barium is retained as the stomach empties. The finding of an accessory pocket is practically diagnostic of gastric ulcer.

3. *The organic hour-glass stomach.* This sign is self-descriptive. It is of somewhat less diagnostic value than the two signs just described because it may be so closely simulated by spasm and because it may be hard to differentiate from the hour-glass deformity associated with carcinoma of the stomach. The hour-glass stomach occurs with penetrating or perforated gastric ulcer, the deformity being produced usually by inflammatory infiltration or adhesions.

In considering the indirect signs we find that, while they may frequently be of great help in making the diagnosis, each sign alone does not carry the diagnostic significance of a direct sign. Of the indirect signs we will consider:

1. *Spastic manifestations in the stomach.* These include the incisura, the spasmodic hour-glass stomach and more general spasm of the stomach. Because they are often seen and because they are so frequently associated with gastric ulcer, these spastic phenomena may be of considerable aid in making a diagnosis. Since they are not uncommonly caused by extra-gastric disease, however, their diagnostic significance is distinctly less than that of the direct signs. The incisura is a sharp, abrupt indentation in the gastric contour. Its depth may vary from a small indentation, barely recognizable, to one extending almost across the gastric lumen. It frequently is due to an ulcer in that segment of the stomach, on the opposite, the anterior or the posterior wall. It may be seen on either the greater or lesser curvature, perhaps more frequently on the former. In observing an incisura, one must of course remember that the incisura angularis and incisura cardiaca are normally found. Pressure from the costal arch or adhesions may sometimes produce an indentation on the greater curvature easily confused with an incisura. Extra-gastric disease producing an incisura in the stomach is the most frequent thing one has to rule out and at times this may be difficult to do, even with a complete gastro-intestinal examination and re-examination of the stomach after giving an anti-spasmodic drug. As a rule, however, the administration of belladonna to the physiologic limit will relax the spasm caused by extra-gastric disease. The spasmodic hour-glass stomach and the more general gastrospasm are fairly self-descriptive terms. The chief consideration is, again, to determine whether a lesion within or without the stomach is responsible for the presence of these signs. Pressure from the

spine may break the gastric contour and simulate spasm of this type.

2. *Six-hour retention.* The retention of one-eighth or more of the barium meal six hours after it has been given is seen with considerable frequency in gastric ulcer and occasionally is the only detectable x-ray sign. However, this sign alone is not sufficient to make a diagnosis because various other factors may operate to produce a six-hour retention, such as duodenal ulcer, gastric carcinoma and migraine headaches.

3. *Alterations of peristalsis.* There may be a weak or an irregular peristalsis, interrupted at the site of the ulcer. Particularly in cases with a retention present there is likely to be a vigorous hyperperistalsis. Occasionally an antiperistalsis may be observed. None of these abnormalities is peculiar to gastric ulcer but when they are observed they should, at least, suggest the possibility of ulcer.

4. *Gastric hypotonus, tender point and lessened mobility,* while often found with gastric ulcer, are of little diagnostic value in themselves. However, they may serve as confirmatory evidence of other signs.

In this resumé of the x-ray signs of gastric ulcer, I wish, again, to emphasize the importance of the direct signs because of their superior diagnostic value. Of these, the niche is seen most frequently. Of the secondary, or indirect signs, the spastic phenomena and the six-hour retention are the most important and most frequently observed. However, their interpretation must be made with considerable care unless other significant evidence is present because these signs alone may at times be misleading.

In considering the x-ray signs of duodenal ulcer the classification is again divided into the direct and indirect. There is only one direct sign and that is deformity of the duodenal contour. Carman states: "In an overwhelming preponderance of cases, a constant duodenal deformity means duodenal ulcer." There are three main factors which produce this deformity; namely, the contraction due to scar tissue, inflammatory swelling, and spasm of the muscular coats. In most cases all three factors are operative in producing the deformity. However, in many cases that are clinically cured there remains a permanent, residual deformity, due to the contraction of scar tissue. A duodenal deformity may be caused by adhesions, by reflex spasm or by carcinoma of the duodenum, but these causes are comparatively rare.

The more common types of deformity seen are:

1. *General deformity of duodenum.* Here there is a general distortion with small indenta-

tions and protrusions, or this may be limited to one lateral border. It is often called the pine-tree or branched coral type.

2. *The niche type of deformity.* In this type the ulcer crater may be seen projecting as a small, dense shadow from one edge of the duodenum.

3. *The incisura type.* Here there is a sharp indentation in the duodenal outline on one side, or frequently on both sides at approximately the same level.

4. *Deformity of the basal border.* This is often represented by an incomplete filling of one portion of the base, giving an irregular base line.

5. *A diverticulum.* This is usually seen just proximal to the site of the ulcer. It is usually on the greater curvature side and in association with one of the other types of ulcer deformity. It appears as a pouch very closely connected with and extending from the duodenum.

6. *The accessory pocket.* It represents the pocket of a perforated ulcer and shows as a projection from the duodenal contour with a more or less definite connecting canal.

7. *Small duodenum without definite deformity.* This finding may at times represent a duodenal ulcer but should not be considered as such without other definitely corroborative evidence.

The finding of a definite, constant duodenal deformity is almost diagnostic of duodenal ulcer.

The indirect signs, especially when more than one of them are present, are often of great aid in making a diagnosis of duodenal ulcer. At times they may be almost diagnostic. Of these indirect signs we will mention:

1. *Alteration in gastric tone.* Very commonly there is increased gastric tone due to a partial stenosis or appearing as a reflex phenomenon when no stenosis is present. It may occur normally in the broad, heavy individual with a steer's-horn type of stomach. In cases with a long-standing obstruction there is usually definite or marked hypotonus in the stomach.

2. *Alterations of gastric peristalsis.* In the presence of a duodenal ulcer there is frequently an increase in the peristaltic activity of the stomach, both in the number and depth of the waves. Carman states that it occurs in 60 per cent or more of the cases. It is often present when there is no definite obstruction but is most marked in the obstructive cases. The hyperperistalsis may be intermittent in character so that one may not be able to observe it at all times.

3. *Alteration of gastric motility.* Hypermotility is frequently present when there is no real obstruction. The stomach will empty fairly rapidly and in six hours' time the barium head may be seen in the transverse or descending colon. With

many duodenal ulcers, however, there is sufficient swelling and spasm to produce a real obstruction to the emptying of the stomach. In these cases there is a hypomotility and a gastric retention of one-eighth or more of the barium meal over six hours' time.

4. *Gastrosplasm.* Spasm in the stomach, due to duodenal ulcer is usually seen in the form of an incisura or a moderate hour-glass deformity. Because this type of spastic manifestation in the stomach is caused by both gastric and other extra-gastric lesions, its diagnostic value is not great.

5. *Local tenderness.* Local tenderness alone is of very little diagnostic value.

Of this indirect group the alterations in the gastric motility, peristalsis and tone are most important. When seen in combination, in a patient whose stomach outline is perfectly normal, they should always suggest the possibility of a duodenal ulcer. When a hyperperistalsis is observed in an enlarged stomach of perfectly normal outlines and there is a six-hour gastric residue, a diagnosis of duodenal ulcer may be made with a reasonable degree of certainty.

The x-ray examination is of paramount importance in making a positive diagnosis of duodenal ulcer, and while every case may not give definite x-ray signs, a careful examination will reveal an extremely high percentage of duodenal ulcers. The observance of a definite, constant duodenal deformity is practically diagnostic. The indirect signs, while of somewhat less dependence, may, in combination, be practically diagnostic.

X-ray study of cases in which the possibility of peptic ulcer is suspected is often the means of arriving at an accurate diagnosis that might otherwise be missed. It also often enables one to locate the ulcer, to determine its relative size and its effect on the functional ability of the stomach. Positive findings of the direct signs are, of themselves, practically diagnostic. Negative findings, after a careful, complete examination, furnish strong evidence against the presence of an ulcer. One must remember, however, that every gastric or duodenal ulcer cannot be found on roentgenologic examination. Therefore negative x-ray findings alone cannot conclusively rule out the possibility of their presence in all cases. Roentgenologic examination has proved of such great value in making an accurate diagnosis of gastric and duodenal ulcer that many clinicians regard it as an indispensable part of the routine examination of their gastro-intestinal cases, particularly those in which the possibility of ulcer is suspected or those in which an accurate clinical diagnosis is in doubt.

In conclusion, I wish to emphasize the importance of a good clinical history and examination.

An accurate diagnosis may often be made from the clinical evidence when x-ray examination reveals no significant signs of ulcer. This is particularly true in early cases with a relatively recent history. It is not infrequently true in hemorrhage cases. Therefore we must consider the clinical examination of first importance or, at least of as great importance as the x-ray examination. Of course, the careful correlation of the clinical and laboratory findings offers the most reliable method of making an accurate diagnosis of gastric and duodenal ulcer.

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II. COMPLICATIONS OF GASTRIC AND DUODENAL ULCERS

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Were it not for the complications, the subject of gastric and duodenal ulcers would not be the problem it is today. In almost an instant the ulcer patient may pass from comparatively good health to the brink of death and if he survives, his activities must often be curtailed to some extent, and his health may later be jeopardized at any time.

These complications are as follows: hemorrhage; perforation, acute and chronic; subdiaphragmatic abscess; obstruction; hour-glass stomach and so-called carcinomatous degeneration. Due to the lack of time, only hemorrhage, perforation and obstruction will be considered in this paper.

HEMORRHAGE

Hemorrhage is one of the most important complications. Its frequency varies from 5 per cent to 25 per cent according to different authorities, although from our series I would say that 5 per cent is probably more nearly accurate. A feeling of faintness, and cold perspiration are probably the most constant early symptoms. Vomiting occurs only in certain cases. If blood is vomited the diagnosis is readily made, but failure to vomit does not exclude hemorrhage, as many patients with duodenal ulcer pass blood by bowel with no emesis at all. There is paleness of the lips and increase of pulse, depending upon the extent of the hemorrhage. There is usually gurgling throughout the bowel and a tendency for the bowel to move and often to be loose. An accurate history is often difficult to obtain at the time, but there is usually the story of increased distress or aggravation of symptoms for a few days or more prior to the onset of hemorrhage. An early diagnosis is essential in these cases, and the sooner they are

recognized the shorter the period of convalescence and the fewer the deaths.

Given a patient with faintness or a feeling of faintness, a cold perspiration and a history of previous gastric distress, the possibility of gastric or duodenal hemorrhage should always be considered and it is better to put him to bed and treat the case as a hemorrhage for twenty-four hours than to allow the patient to go on and lose a lot of blood. While the pulse is of value, there is no great increase until the patient has lost considerable blood; consequently one should not wait for a rapid pulse before making the diagnosis. Both the red cells and the hemoglobin drop rapidly with hemorrhage and blood counts are of considerable diagnostic value, especially in determining the progress of the case and the cessation of bleeding. The first specimen of stool obtained will usually clarify the diagnosis, although if no tarry or bright blood is seen, the Weber and other tests should be made for occult blood.

The prognosis is dependent largely upon early diagnosis and proper treatment. Some patients, especially young adults, recover spontaneously with no diagnosis being made.

In regard to treatment, the most important factor, in our opinion, is rest of the alimentary tract and this is best accomplished by starvation and the liberal use of opiates. In our routine hemorrhage treatment we give absolutely nothing by mouth during the first ninety-six hours and then if the hemorrhage has apparently been arrested, as indicated by pulse, and so forth, the patient is allowed small amounts of water, probably one ounce every hour during the next forty-eight hours. Opiates are given at once and usually a one-grain opium suppository every four or six hours does very nicely in controlling the intestinal peristalsis. If the patient is extremely nervous or irritable, a quarter-grain of morphin is given hypodermically as necessary. Preferably the patient should be kept in a semi-stuporous condition for the first few days. Proctoclysis often stimulates intestinal peristalsis and has caused recurrent hemorrhage at times. Therefore it has seemed more feasible to discontinue the Murphy drip or retention enemas during the first few days and to supply the body fluid by means of one or two liters of normal saline under the breasts daily. The ice-cap or ice-coil is kept constantly over the abdomen and if the hemorrhage has been severe, some form of hemostatic serum is given, although its value is problematic. If there has been no recurrence of hemorrhage by the sixth day, milk is usually started, one ounce per hour, and if tolerated, the amount of milk and feedings are increased daily until the patient is on the routine

ulcer management, preferably omitting the alkalis and gastric lavage during the first two or three weeks. Too much emphasis cannot be laid upon the necessity of starvation immediately following a hemorrhage, as the majority of persistent or recurrent hemorrhage cases which we have seen in consultations have been aggravated by starting milk or other food within forty-eight hours or so after the first hemorrhage. Another factor that we feel is important in these cases is to take no blood pressure readings in the first few days. It is immaterial what the pressure is at the time of hemorrhage and although we know that the prognosis is less favorable in hypertension cases, the constricting and releasing of the blood vessels may cause a dislodgement of the blood clot and start another hemorrhage.

We are aware that certain authorities advocate other methods, such as immediate surgery, transfusions, and the use of alkalis, immediately after the hemorrhage. A few years ago we gave calcium carbonate hourly to some of the patients but it invariably caused nausea and vomiting and we returned to the starvation method. Immediate surgery in a patient already weakened from hemorrhage seems to me illogical. Mikulitz in 1897 expressed this very aptly in the following words: "It can never be prophesied with certainty in any individual case if hemorrhage is really of sufficient danger to justify surgical interference, so that one should always wait and see whether the bleeding will not be arrested by medical treatment." Balfour more recently said "the danger of succumbing to hemorrhage is less than the danger of operation during hemorrhage."

Hurst, in his admirable book on gastric and duodenal ulcer, describes the indications for immediate surgery as follows: "a persistence or recurrence of severe hemorrhage whilst patient is still fasting, especially in individuals past middle life with a long history pointing to the presence of chronic ulcer and with arteries so degenerated that they are unlikely to contract sufficiently for satisfactory plugging by thrombosis," and states that in all his medical practice he has advised immediate surgery in just two cases, and they were of the type mentioned above.

As to transfusion, I do not believe it necessary in the average case, but it should be reserved as a preoperative step in those relatively few cases in which bleeding persists and in which immediate surgery is indicated.

As to the problem of resection or other form of gastric surgery as a prophylaxis against subsequent hemorrhage, there is again a large difference of opinion. Many of these hemorrhage patients have a so-called "hemorrhagic diathesis" and if an

ulcer is resected or cauterized in one part of the stomach, another is likely to occur elsewhere, often along the margin of the operative wound. It must be remembered that hemorrhage is an indication of activity of the ulcerative process and never occurs under strict medical treatment. Hurst states that liability to hemorrhage is just as great after an operation has been performed for gastric or duodenal ulcer as after medical treatment. Therefore in cases of repeated hemorrhages, a resection of the entire ulcer-bearing portion of the stomach seems most favorable if any operation is done. Perhaps when each individual hemorrhage patient realizes that once he has had a hemorrhage, there is always the likelihood of another hemorrhage, and treats himself accordingly, the hemorrhage problem is more likely to be solved than heretofore.

PERFORATION

The most serious complication is an acute perforation. In this there is a sudden sloughing of the ulcer base, which is the end result of a slowly progressive process of devascularization. The aperture is of variable size, and the stomach contents are emptied through it into the peritoneal cavity.

Perforation is, I believe, less frequent than hemorrhage. It may occur at any age, there being on record two acute gastric perforations, confirmed by autopsies, in infants five and twelve days old respectively.

The symptoms of this complication may best be considered under three stages:

(1) *The Stage of Primary Shock.* The patient is suddenly seized with terrific upper abdominal pain which soon spreads over the whole abdomen. It usually comes on an hour or so after eating or after exertion. There is immediate, board-like rigidity, with retraction of the abdomen. This rigidity is universal and there is no relaxation. The diaphragm is involved, resulting in rapid, shallow, costal breathing. Vomiting is common in gastric perforations but less so in duodenal ones. Pain is often referred to the back if the ulcer is on the posterior wall, although the great majority of perforations are on the anterior wall. The pulse is weak and there is an appearance of shock.

(2) *The Stage of Reaction.* Within one-half hour to two or three hours the shock passes off, the pulse improves in quality and may be of normal rate. The temperature rises to normal. Although the rigidity and tenderness are as pronounced as before, the patient feels better and appears to be far less seriously sick than before. Due to the escape of gas into the peritoneal cavity, the area of liver dullness diminishes in some cases

and this may often be of considerable diagnostic value in questionable or borderline cases. The most practical application of this principle is the demonstration of air between the liver and diaphragm by means of the x-ray, with the patient in an upright position. It must be emphasized, however, that such procedures should never be done except in the borderline cases of uncertain diagnosis. If operation is not performed during this second phase the patient passes into

(3) *The Stage of Peritonitis and Toxic Shock.* The abdominal rigidity does not diminish but the intensity of the tenderness localizes. When a duodenal ulcer perforates, the fluid is deflected, as Moynihan pointed out, by "the little hillock in the transverse mesocolon so that it flows down the outside of the ascending colon into the right iliac fossa." When this is filled it overflows into the pelvis. This explains the tenderness in the right iliac fossa and of forty-nine cases of duodenal perforation collected by Moynihan in 1901, a diagnosis of appendicitis had been made in nineteen on that account. In this third stage the usual signs of peritonitis develop. The pulse becomes rapid and weak. The loss of fluid by exudation and vomiting causes excessive thirst and the so-called "Hippocratic facies." Ileus develops and the rigidity is replaced by distension. Vomiting diminishes. No sounds are heard on auscultation over the abdomen and no results are obtained from enemas. Death usually results in from two to five days after the onset, from general failure of the body functions.

In no other abdominal condition is an early diagnosis so essential as in a perforated ulcer. The majority of such patients, if operated upon within the first six or eight hours, do very well, but each hour of delay after that diminishes their chances. The history of the attack and history of previous trouble in association with the board-like rigidity is usually sufficient for the diagnosis, provided the patient is seen early and before opiates have been administered. It is not always possible to diagnose the exact condition, however, and one must be content to diagnose simply an acute surgical abdomen.

It is far more important to differentiate a perforated ulcer from a non-surgical condition such as lead colic, gastric crisis of tabes, renal colic, biliary colic and acute food poisoning, than from some other surgical condition, such as acute appendicitis, intestinal obstruction, acute pancreatitis, ruptured ectopic or mesenteric thrombosis.

The following points should be borne in mind in making a differential diagnosis. In lead colic the pain may be very severe and the abdominal rigidity somewhat confusing, but the pain is

colicky in type and the rigidity less marked and less continuous than in perforated ulcer. Usually there is the past history of attacks of intestinal colic and severe constipation rather than the characteristic ulcer history. The blue line on the gums is of value but less so than the punctate basophilia found on blood smears.

In the gastric crisis of tabes there is practically no abdominal rigidity or tenderness. In addition there is the history of other attacks of crisis, of lightning pains, and the finding of Argyll Robertson pupils and the absence of knee jerks.

In renal colic the rigidity is not marked, and if present, is unilateral. The pain is usually on the right or left side, often radiating from the back to the genitals. There may be urinary frequency or tenesmus.

In biliary colic there is no rigidity. The pain is colicky, and is most frequently localized under the right ribs, with radiation to the right shoulder blade.

In intestinal obstruction there is distension without rigidity, paroxysmal colicky pain, intestinal vomiting, and frequently, visible peristalsis.

Acute pancreatitis usually occurs in patients with a previous gall-bladder history. There is not the rigidity of a perforation and the tenderness is more localized. A palpable tumor may be felt in the epigastrium.

In regard to treatment, immediate surgery is indicated, and the sooner performed the better. Our mortality rate has been much less in those cases in which the perforation was sutured and the abdomen closed, with drainage. Only a few developed obstruction and in those, of course, a gastro-enterostomy was indicated later.

Some authors believe that suturing the perforation causes a complete healing of the ulcer. Such has not been our experience. We have seen a number of patients with active ulcer symptoms months after the perforation was closed, and three patients with a second perforation. We feel that following the operation the patient should be put on strict ulcer management just as though the ulcer had never perforated.

In subacute perforations, the perforation comes on abruptly, but the resulting peritonitis is strictly localized to a small area. This is usually due to the fact that the perforation is at once plugged with omentum or fibrin, and no gastric contents escape into the peritoneal cavity. The symptoms are identical with those of acute perforation, but less severe, and if the patient is kept quiet, they usually subside within twenty-four hours although the local tenderness and rigidity persist for some time.

A patient with this type of perforation usually

recovers on starvation and the liberal use of opiates, but unless one can be very positive of the diagnosis, the case should be regarded as surgical and the abdomen explored.

Organic obstruction at the pylorus may be due to neoplasms or ulcer of the stomach itself, to ulceration or scar tissue of the duodenum, or more rarely, to a narrowing from disease in the adjacent organ. Of these, the ulcers and their resulting scar tissue, especially of the duodenum, are the most common, and are the only ones in which we are interested in this paper.

Obstruction is usually not an early symptom, but the result of many flare-ups in a long-standing ulcer. As long as the peristaltic waves are strong enough to empty the stomach over night, there may be very few additional symptoms. When the muscle decompensates, the stomach is no longer able to empty itself, and the symptomatology changes. The characteristic hunger pains no longer come on an hour or so after eating, but there is more or less of a fullness or heaviness in the stomach all the time, usually aggravated immediately after eating. Alkalies and food give very little or no relief. The patient is usually conscious of the peristalsis and says, "it feels as if something is trying to get out of my stomach." Vomiting gives relief and the patient soon learns that by forcing vomiting, he will get temporary relief. Constipation is very persistent, and very little relief is obtained from the ordinary laxatives. Thirst becomes pronounced, and the starvation and dehydration lead to loss of weight and to weakness.

The clinical diagnosis of a pyloric obstruction can usually be made from the history of vomiting food eaten several hours before and from the visible peristaltic waves. The presence of a large amount of free hydrochloric acid in the stomach contents is strongly indicative of a duodenal ulcer, while an achylia or subacidity is usually indicative of a neoplasm rather than an ulcer. In a high-grade obstruction the spasm is usually so tight that it is impossible to fill the duodenal bulb with the barium and for that reason it is usually very difficult at the first x-ray examination to differentiate between high-grade obstruction from a duodenal ulcer and from a gastric ulcer at the pylorus.

In every case of pyloric obstruction due to ulcer, three factors are involved; spasm, inflammatory swelling, and scar tissue, and the prognosis in any case depends largely upon which of these three is the predominant factor. If we know that the obstruction is of long duration, we regard it as a surgical indication. If, however, the obstruction is of recent origin, we advocate placing the individual upon strict ulcer management with gastric lavage each night. After about three weeks

of such management, if the stomach empties itself within the usual time, we regard the obstruction as due chiefly to spasm or inflammatory swelling, but a considerable delay in the emptying time is indicative of scar tissue, and we feel it is useless to temporize further with medical means, for every slight flare-up of the ulcer may bring on a recurrence of the obstruction. I think it is generally recognized that this type of case is the one in which a gastro-enterostomy is indicated and in which the most brilliant results are obtained.

A serious but rather rare complication of obstruction is tetany. In the ordinary ulcer management, we frequently see cases of slight alkalosis, manifested by headaches, nausea and vomiting. It has been shown that this is due to a disturbance of the blood chemistry, in which the chlorid is low and the bicarbonate high.

Tetany, which as far as I know, occurs only in cases of pyloric obstruction, depends upon the degree of alkalosis and generally occurs when the carbon dioxid combining power of the plasma rises above 100 volumes per cent. The blood calcium is at times slightly reduced, but the reduction is much less than in infantile tetany, in the tetany following injury to the parathyroid glands or in that associated with diarrhea. Many etiologic theories have been advanced, such as the loss of chlorids by vomiting, or the use of alkalies, but tetany has been known to arise before vomiting occurred and when no alkalies had been used. Haden and Orr suggest that it is due to a toxin which becomes attached to the chlorids so that they are no longer available, with the result that there is a relative increase in the carbon dioxid. In any case of pyloric obstruction in which symptoms of alkalosis and tetany develop, a gastro-enterostomy is urgently indicated, but not until the tetany has been relieved. All alkalies are discontinued. Normal saline is given subcutaneously, and in severe cases glucose should be given intravenously. Such treatment in the majority of cases will cause a cessation of the symptoms within a few hours.

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III. THE TREATMENT OF UNCOMPLICATED CASES OF GASTRIC AND DUODENAL ULCERS

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In discussing the treatment of gastric and duodenal ulcer it is necessary to refer to the etiology. There is nothing new along this line, and while the exact cause of gastric and duodenal ulcer remains somewhat of a mystery, there are two commonly

accepted factors believed to play a most important part. The first of these is a disturbance in the nutrition of a local spot of mucous membrane in the stomach or duodenum. This disturbance depends upon the peculiar blood supply and clinically is believed to be due usually to infected or simple thrombi, plugging up the near end arteries in the stomach or duodenum. The second factor is the digestive or corrosive effect of an active gastric secretion.

Embolic thrombosis in the arteriole opens a prophylactic field and accordingly ulcer patients should be examined thoroughly, with special emphasis upon the sinuses, nose, tonsils and teeth as possible sources of infection, as well as the gall-bladder, appendix, the prostate in men, the female adnexa in women, and other organs carrying possible foci of infection. When a focus of infection is found the proper treatment for its eradication should be instituted.

It is upon the corrosive or digestive effect of the acid gastric juice that most medical treatments of ulcer are based. The action of gastric juice on ulcer is sometimes illustrated by its action on albumin in a Metz tube. It has been known for a long time that if an albumin tube is placed in gastric juice in which free hydrochloric acid is present, the albumin will readily be digested. On the other hand, if the albumin tube is placed in gastric juice in which the hydrochloric acid has been neutralized, no effect is produced on the albumin.

In complete obliteration of the blood supply by thrombi, necrosis is sure to be the result and an ulcer is formed by sloughing. Ulcers occur only rarely in achylia, because healing takes place rapidly in the absence of hydrochloric acid. When there is no free hydrochloric acid to damage the new granulation tissue, healing takes place as in any other part of the body. This was illustrated clinically in a case we saw recently, in which the patient was previously known to have an achylia. The patient had an attack of epigastric pain in the early evening. A physician was called, who gave him a slight sedative and the pain disappeared, but returned soon after midnight, at which time I was called in consultation. In association with the pain there was considerable abdominal rigidity, and the possibility of a perforated ulcer was strongly considered. The patient was removed to the hospital and hot applications were applied to the epigastrium, followed quickly with considerable relief and disappearance of rigidity. The next day the patient was examined under the x-ray with a barium meal, and a large ulcer was found on the lesser curvature. This ulcer healed rapidly and was scarcely detectable at the end of four weeks.

It is my belief that healing in the absence of free hydrochloric acid takes place without any treatment and had he not been examined early we would never have known that an ulcer had actually been present.

In the presence of an active gastric secretion it is reasonable to assume that the free acid disintegrates the protoplasm of a devitalized mucosa and destroys the newly forming granulation tissue.

The Sippy treatment is based upon the corrosive effect of an acid gastric juice. In the light of the present knowledge of the etiology of ulcer, both experimental and clinical, there is a great deal of evidence to support this theory. The details of the etiology, however, are not within the limits of this discussion.

It was my privilege to be with Dr. Sippy during 1910-11 in the Presbyterian Hospital in Chicago. This was before the first publication of his work on ulcer, so I have had twenty years' experience in the Sippy treatment. While we believe in the principles laid down by Dr. Sippy, we have seen fit to make certain changes in their application. The fundamental change we have made deals with the use of alkalizing powders. I have heard Dr. Sippy many times express regret that there were no ideal alkalizing powders.

In his treatment¹ two powders are used, one consisting of magnesia and soda, and the other of calcium carbonate and soda. These powders are alternated with a view of controlling constipation or loose stools. While the magnesia is a good neutralizer, like practically all cathartics, if continued, it produces an irritated condition of the bowel. This happened to Dr. Sippy's cases, and it occurred in our own. I have seen many patients coming to our office who were treated with magnesia, and in whom the bowel had become so profoundly disturbed and the symptoms so modified that the ulcer symptoms were difficult to recognize.

Calcium carbonate is not usable without the magnesia because of its constipating effect. The exceptions to this are a few cases in which the stools are naturally loose. In most cases calcium carbonate produces obstinate constipation and fecal impaction when used without the laxative effect of some such drug as magnesia.

Our first modification of the use of the alkalis was to eliminate both calcium carbonate and calcined magnesia, and substitute in their place soda bicarbonate. With this powder we met two well-known difficulties. The first was that it stimulated the secretion of hydrochloric acid so that in many instances its dosage had to be increased to 40 to 60 grains or even more every hour to maintain neutralization. This large quantity of alkali led to

the second difficulty; that is, the danger of alkalosis. While very few patients manifested serious symptoms of alkalosis, we had many with headaches and restlessness, so that we questioned the advisability of continuing the use of soda in large doses.

Our second step was to eliminate completely all powders during the day and substitute in their place two or three square soda crackers. The soda crackers do not have a high neutralizing effect. The neutralizing effect of three crackers is equivalent to that of 10 grains of soda, as tested in our laboratory. However, the crackers contain carbohydrates and fat and do not stimulate the acid secretion. In association with the hourly feedings of milk and cream and with the other feedings, they are usually sufficient to maintain complete neutralization of the gastric secretions in nearly all cases. By checking the secretions during the day, we have estimated that in more than 90 per cent of the cases the free hydrochloric acid is fairly well controlled.

The beginning of treatment, as modified, is as follows:

1. Milk and cream, equal parts of each, 3 ounces every hour, on the hour, from 7:00 a. m. to 7:00 p. m., inclusive.

2. Crackers (two or three ordinary square crackers) every hour on the half-hour from 7:30 a. m. to 6:30 p. m., inclusive.

3. Soda bicarbonate, 30 grains, at 7:30, 8:00, 8:30, and 9:00 p. m. If there is no tendency to constipation, calcium carbonate or tribasic calcium phosphate may be substituted for the soda.

4. Paraffin wax should be chewed for four or five minutes after each feeding. This is for two reasons: first, it furnishes an alkaline saliva to help control neutralization of gastric secretion, and second, it cleanses the mouth with its natural secretion.

5. Gastric lavage at 9:30 p. m. The secretions can be tested, and if acid, the alkaline powder should be increased to the point of neutrality.

6. The secretions should occasionally be tested at 4:00 or 4:30 in the afternoon. If free acid is present, the crackers can be increased from two to three.

The patient is kept on the milk and cream and crackers for two or three days, after which time additional feedings are added each day. These feedings consist of articles similar to the following, somewhat according to the Sippy plan¹: Eggs, soft-boiled, poached or raw; a cereal, such as cream of wheat, farina, well cooked rice, oatmeal, cornmeal mush, and so forth, three or four ounces, prepared to eat with cream and sugar; a small help-

ing of mashed or baked potato with butter; custard, gelatine, or a simple pudding; a small helping of buttered toast, served with the eggs; creamed soup; milk toast; and a choice of many other foods of the bland, nutritious, non-acid-stimulating type.

One or two such helpings of food are added each day until the patient, at the end of seven or eight days, is taking one such feeding at the following hours: 7:00 9:00, and 11:00 a. m.; 1:00, 3:00, and 5:00 p. m. The diet treatment, as usually outlined at the end of the seventh or eighth day, is as follows:

1. Milk and cream, equal parts, three ounces every hour from 7:00 a. m. to 7:00 p. m.

2. Crackers (two or three ordinary square soda crackers) every hour from 7:30 a. m. to 6:30 p. m.

3. Soda bicarbonate, 30 grains, increased to desired amount, 7:30, 8:00, 8:30, and 9:00 p. m.

4. Cereal, such as cream of wheat, three ounces, prepared to eat, at 7:00 a. m.

5. A soft-boiled, poached or raw egg, and small piece of buttered toast at 9:00 a. m.

6. Small helping of mashed or baked potato, with butter, at 11:00 a. m.

7. A soft egg and small helping of buttered toast at 1:00 p. m.

8. Custard at 3:00 p. m.

9. Cereal, such as cornmeal mush, three ounces, after prepared to eat, at 5:00 p. m.

At the end of three to six weeks, three light meals a day may be substituted for the two-hour feedings; the milk and cream, crackers, and powders to be continued the same as above. The three meals should be small in quantity. Sippy¹ believed that they should not exceed 10 to 15 ounces. They may consist of any foods previously allowed or be selected from the following: cereals, almost any kind except those containing bran, prepared in the usual way, with cream and sugar, preference being given to cooked cereals; eggs, soft-boiled, poached, raw or scrambled in butter; mashed or baked potato with butter; custards, tapioca, plain jello, simple puddings; creamed soups; white meat of chicken, white fish, broiled or baked.

A few weeks later the following may be added to the above: vegetables, preferably soft vegetables or ones that can be reduced to a near-purée form, as carrots, squash, sweet potatoes, peas (run through colander), asparagus tips; also a moderate helping of cooked fruit, as stewed peaches, pears, apples, prunes, peach butter, mild marmalades as a spread on bread; raw fruit juice, as orange juice or grapefruit juice, one or two tablespoonfuls per day. There is no objection to adding to the list such things as cottage cheese, American cheese, a

small amount of tender, lean meat and other foods of the bland type.

The treatment as outlined is our usual routine, which can easily be modified to meet the requirements of the individual case and still carry the principles laid down by Dr. Sippy. For instance, if crackers are taken poorly, which does not often happen, they may be replaced by the alkaline powders of Sippy. If milk and cream are handled with difficulty or are particularly disliked by the patient, cream soups or cereals may be substituted in their place. Likewise substitutions are allowed for the two-hour feedings as long as they conform to the bland and non-irritating type of food. Just as Brown² said, in speaking of the Sippy treatment, "I know of few conditions in medicine offering as much opportunity for individuality of treatment as is possible in the application of the Sippy principle to the treatment of peptic ulcer with all the individuality which various ulcer cases exhibit."

Duration of the medical treatment. It is impossible to determine the time when a peptic ulcer can be considered healed. We had one patient, operated upon for biliary obstruction, who also had a rather large lesser curvature ulcer. He had a second operation for biliary obstruction four months later but did not recover. Partial autopsy showed complete healing of the peptic ulcer. Clinically, however, there is no possible method by which we can be sure that healing is complete. We have estimated that the moderately severe, uncomplicated ulcer should be continued on the strict management as outlined for six months at least. The severe cases should be under management for at least one year, the severe case being defined as one in which there have been repeated attacks, a large deformity visible by x-ray, or unusually severe symptoms in the present attack. Mild cases should be treated, in our opinion, about three months. Mild cases are those in which there have been only one or two attacks, or the attacks have been of short duration, or little or no deformity shows on x-ray films.

Following the strict management it is our belief that these patients should be continued on a course of incomplete neutralization, equivalent in time to that outlined for the strict management, according to the severity of the case. Our plan of incomplete neutralization is outlined briefly as follows:

1. Three meals a day selected, largely from the foods previously allowed, but allowing small additions of foods ordinarily eaten. The patients are asked to avoid pickles, cucumbers, and the harsh, woody forms of food, highly seasoned foods, excessive sweets, excessive fruits, and at all times alcohol and tobacco. Recent literature has pointed out the harmful influence of both alcohol and to-

bacco, and I believe it has not been too strongly emphasized. I have seen a return of acute symptoms in many instances after an alcoholic debauch, and I recall one patient who had had repeated hemorrhages and many recurrences, who has remained free from trouble for over three years since quitting the use of tobacco.

2. A glass of half milk and half cream in the middle of the forenoon and the middle of the afternoon.

3. Three or four soda crackers midway between each two feedings, considering the milk and cream as feedings.

4. Soda bicarbonate, one teaspoonful one hour and two hours after the evening meal.

While we consider the neutralization of the free hydrochloric acid as the most important factor in the treatment, there are other phases which require careful consideration. Rest is essential in the majority of cases, and mental rest as well as physical rest must be considered. Anyone who has treated many ulcer cases is aware of the exacerbation of symptoms commonly seen in association with mental strain. For instance, attorneys often experience a return of their trouble while going through the strain of a long court session. Ulcer symptoms often come to the foreground in the case of business executives when enduring the worries of a business reverse.

We regard bed rest as imperative in the severe cases. It is of considerable service but not imperative in the moderate cases, and hardly advisable at all in the mild cases.

Hospitalization. We do not believe hospitalization is imperative in the majority of uncomplicated gastric and duodenal ulcers. However, the hospital is convenient as a place where the patient can be established on the proper treatment. It serves as a school, as for the diabetic patient, with the advantage of trained internes and nurses. While in the hospital the patient should be taught the important things he should know about the management of ulcers. He should be taught the use of the stomach tube and how to pass it for himself, to wash out the stomach and to check the gastric secretions for free hydrochloric acid. This is imperative in fulfilling the requirements of strict neutralization. It is our belief that too little emphasis has been placed on the value of the stomach tube. It is not objectional to most patients after they have once learned to use it for themselves. Its principal value is in the beginning of the treatment, as in an acute attack. It completes the emptying of the stomach and controls the night secretion which the powders alone cannot be expected to do. It is, we believe, of special service in helping to prevent a recurrence. Its regular

use can be discontinued or reduced to once or twice a week after we have reason to believe that healing is started. This we estimate to be after a period of five or six weeks. Where there is too much difficulty encountered in passing the tube, or severe objection on the part of the patient, we believe it better to discontinue the use of the tube altogether. The treatment maintains fair neutralization without the tube and we must not allow the patient to become discouraged with the treatment because of his dislike of the stomach tube.

During hospitalization the patient is usually kept in bed because he is giving up his entire time to the treatment and should make the best of what complete rest will accomplish for him.

The duration of hospital confinement should vary with the individual patient and depends largely upon the ease with which he becomes familiar with the ulcer program. Long confinement is unnecessary in the majority of uncomplicated cases. The average patient will learn his program in ten to fourteen days. Severe cases may require longer hospitalization.

Management of the bowel in the treatment of ulcer. Because of the low-residue diet in the treatment of ulcer, most patients become constipated during the early treatment. In the beginning this can be controlled satisfactorily with a plain water enema given every other day. Olive oil, for patients who tolerate it well, can be given in doses of one-half to one ounce three times a day. It will be recalled that olive oil in large doses was at one time recommended by Conheim as a major step in the treatment of gastric and duodenal ulcers. If the oil is not well tolerated or is insufficient, heavy liquid petroleum in sufficient quantity can be given at bedtime after the gastric lavage. In the later course of the management the bowel should be controlled dietetically by oily cereals and finely divided vegetables and a moderate quantity of fruit, as in any ordinary case of constipation.

Factors disturbing the treatment. There are certain conditions encountered in the treatment of gastric and duodenal ulcer which are likely to become disturbing. Of these the ordinary complications form an important group. Many are mechanical and require surgery. Others require a modification of the usual medical plan. The complications should be recognized and the proper treatment applied. Diseases commonly associated with gastric and duodenal ulcer not infrequently give rise to confusion in the treatment of ulcer. The ulcer treatment is not a cure for other diseases. Cholecystitis, gall-stones, appendicitis, colitis, pancreatitis, fibroids, cystic ovaries, pyelitis and kidney stones, as well as neuroses and functional digestive trouble, are not remedied as a rule on the

ulcer treatment. Failure of the ulcer to respond to the treatment should suggest the presence of associated disease or complication and is an indication for a complete recount of the condition.

Results of treatment. Dr. Brown, who was associated with Dr. Sippy, has recently reported the end results in the treatment of 1,224 patients treated in the Presbyterian Hospital between 1912 and 1927. He shows that in about 66 per cent of the cases good medical results were obtained. In practically 50 per cent, complete cure was reported. Twenty per cent were estimated as failures. This group included practically all ulcer cases seen. Many were complicated and according to Dr. Brown, probably should have been regarded as surgical. The 20 per cent failures were built up largely from this complicated group.

The immediate response to the treatment is direct and usually complete. Pain and distress disappear in the course of two or three days and usually remain absent, if the ulcer is uncomplicated. It is one of the most satisfactory conditions to treat in medicine. The main trouble is the number of recurrences. These patients are subject to the probability of recurrence no matter by what method they are treated. Ulcer may recur after medical cure, or it may recur after practically all known methods of surgical treatment. We have seen many cases of hemorrhage after gastro-enterostomy. The patient should be taught the probability of recurrence and instructed how to take care of it properly.

THE ULCER PROBLEM

With the knowledge we have at present, it would seem to me that there are three important things in the solution of the ulcer problem. The first is its early recognition and early application of the right kind of treatment. The second is the recognition and treatment of relapses or recurrences. The third is the prophylactic measure already referred to in the elimination of focal infection. Of these the early recognition and application of the proper treatment are too often neglected. In this respect, ulcer is similar to tuberculosis and rheumatic heart disease. If the ulcer is neglected until the ravages of the disease have gone on to gross deformity and physiologic crippling of the organ, then all forms of treatment are likely to fail. That this is being done is shown by the average duration of ulcer symptomatology in many cases when the diagnosis is first made.

Even when the diagnosis is made early, many, because of the mild symptoms, are poorly advised and poorly treated. The old "hyperchlorhydria management" of incomplete neutralization has long since proved itself inadequate, and while it brings relief and may cure some, it too often paves

the way to more serious trouble. The same, I believe, applies to the more recently advised treatment of much the same type under the term "ambulatory treatment."

In the early recognition of an ulcer, too much emphasis should not be placed on the x-ray findings. It is these early ulcers that the x-ray is most likely to miss. As an illustration, I recall a patient who had previously been seen at a very reliable clinic, who stated that when she went through the clinic they told her that the x-ray findings were negative, but that a diagnosis of ulcer was made by the clinician purely upon her symptoms. At the time I saw her, two years later, she had a typical duodenal ulcer deformity, rather high-grade, shown by the x-ray.

A physician friend of mine came to me several years ago with fairly typical ulcer symptoms, but we could demonstrate no lesion with the x-ray. He made the rounds; some told him he had an ulcer, and some said he did not. His confusion led to haphazard treatment, although it maintained relief while continued. Today he has a permanent, well-defined duodenal deformity that anyone could recognize. The discrepancy between the number of gastric ulcers recognized by the x-ray and gastric ulcers and ulcer scars found in the autopsy records, leads me to believe that many gastric ulcers, especially early ones, go unrecognized by the x-ray.

Basis upon which to recognize an early ulcer. The most accurate basis upon which to recognize an early ulcer is (1) clinical symptoms characteristic of ulcer; (2) response consistent with ulcer in carrying out the principles of treatment as outlined by Dr. Sippy. Dr. Sippy has taken this phase up in detail in his treatment. The neuroses, and hyperchlorhydrias depending on reflex causes, will soon make themselves known by producing symptoms in spite of the neutralization if the treatment is continued for any length of time, because neutralization does not cure them.

Recurrences. It is an undisputed fact that recurrence of an ulcer is likely to happen under any known type of treatment, medical or surgical, and the patient should be so advised. The knowledge influences him to carry out his management accurately. It prepares him to expect recurrence, and he does not get despondent when it occurs, but is ready with the management he has learned.

From the beginning of the management our patients are instructed in the case of recurrence of any stomach symptoms to wash out the stomach that night before going to bed. If symptoms recur so that it becomes necessary to wash out the stomach three nights in succession or close together, the patients are instructed to go back immediately

to the treatment of milk and cream hourly, crackers on the half-hour and soda at the end of the day, and to eat with this only three light meals per day, making them small in the beginning, and increasing them soon to the quantity necessary to prevent weight loss. This treatment should be maintained for two or three weeks and the less rigid management followed for about the same time. If treated on the first manifestations of symptoms, the ulcer is likely to heal rapidly and in this manner the cure can be maintained.

If healing is maintained over two or three years the patients are likely to have very little or no more trouble, but they should be ready at all times to place themselves on the treatment if the symptoms return. Should the symptoms fail to respond immediately, the patient should see his physician without delay.

SUMMARY

We believe that the treatment as outlined is a relatively simple one, free from the dangers of alkalosis. Without a great deal of trouble it can be carried out with ambulatory patients in the same manner as with those who are hospitalized. The training can be accomplished in a medical office as well as in a hospital. It exceeds in accuracy any of the incomplete plans, and is as good a treatment for the poor as it is for the rich.

The symptoms of peptic ulcer and the characteristic response to the complete neutralization treatment furnish a fairly dependable diagnostic method, a method which is safe in the hands of the general man who may not have ready access to the x-ray, a method especially valuable in the early case in which the x-ray may lead to confusion.

Early institution of the proper treatment is likely to effect a cure, while mismanagement may lead to a complication which resists all known methods devised for relief.

When the treatment fails to relieve symptoms, the case should be restudied, complications should be recognized and the right kind of treatment advised for them, associated disease should be sought and treated accordingly. Recurrences should be expected and the patient so advised that he may guard against their damage by immediate treatment.

A large part in the solution of the ulcer problem rests with the general man who is seeing these early cases, and if what I have said will stimulate you to use the treatment and if you get the results I believe possible, I will feel well repaid for the effort I have made in preparing this discussion.

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SURGICAL ASPECT OF CARCINOMA OF THE STOMACH*

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The surgical treatment of carcinoma of the stomach is far from entirely satisfactory in that a majority of the resected cases have a recurrence of the disease. However, medical treatment has nothing to offer, is hopeless, and always terminates fatally. The great need in cancer of the stomach, as in cancer elsewhere, is for an earlier diagnosis of the condition and earlier surgical treatment. It would seem then, that it is the responsibility of the entire medical profession, particularly the internist, with all available laboratory work and the use of the x-ray, to make a diagnosis on all dyspeptics at the earliest possible opportunity. We should encourage the laity to have their chronic complaints ferreted out so that they may have a definite idea as to the nature of their disease.

There is no definite group of symptoms by which carcinoma of the stomach may be diagnosed. The text-book picture is of no value if we intend to find the condition early enough in its course so we may attack it surgically. The disease may simulate duodenal ulcer, with or without obstruction, a reflex dyspepsia, or there may be no complaints whatsoever relative to the stomach. Weight loss, anemia, loss of appetite and weakness may be the paramount symptoms. Therefore we must use every possible means in determining the cause of the patient's complaint to make an accurate early diagnosis. Any lesion of the stomach, regardless of the size or position, should be considered suspicious of malignancy unless definitely proved otherwise. It is true, however, that a short history, a low or absent free hydrochloric acid, or the location of the lesion in the distal third of the stomach are significant data in suspected malignancy.

The question of whether or not benign ulcers become malignant will not be discussed. Clinically, however, from a roentgenologist's viewpoint, and by gastric analysis, the benign and malignant cannot be differentiated with certainty. MacCarty has shown that ulcers measuring less than $2\frac{1}{2}$ cm. in diameter are usually benign and those larger are usually malignant. However, the Mayo Clinic reports that twenty-three per cent of the carcinomas resected at the clinic are within the size range of benign ulcers, and that it is not uncommon to find malignant ulcers in the presence of normal acidity. It would therefore seem logical to consider all cases of chronic gastric ulcer as surgical, regardless of location, size, or acidity, with the idea that though there may be a normal acidity or the lesion may be small, we might still

be dealing with malignancy or a benign ulcer, which, if permitted to continue its course, might terminate in a carcinomatous ulcer.

A statistical study seems encouraging in that previous to 1914, Friedunwald, reporting one thousand cases, found only twenty-eight per cent operable and of these, radical resection was done in only 3.3 per cent. Investigations during the past ten years at various institutions report radical resections in about half the cases.

LOCATION OF THE GROWTH

The cardia is primarily involved in less than one per cent, the lesser curvature in about one out of four cases, the pylorus in about sixty per cent and there is diffuse involvement in about ten per cent of the cases. The question of when a frankly malignant case should be considered inoperable without exploration must, in the absence of palpable metastasis, be decided entirely on the basis of the extent of the x-ray findings. Lesions of the cardiac end of the stomach, particularly in the region of the lesser curvature, are obviously inoperable, but a lesion of the greater curvature of the fundus can sometimes be resected. If there is any doubt as to the operability of a lesion, the patient should certainly be given the advantage of an exploratory operation.

There are certain signs and symptoms which suggest a high operative risk, or that the disease is far advanced, such as obesity, rapid weight loss without obstruction, marked anemia, the youth of the patient or a high-grade obstruction.

Surgery may be a curative measure with radical resection, or a palliative one to relieve obstruction. However, we should never overlook any possibility of removing the entire growth together with regional lymphatic glands if at all possible.

PREOPERATIVE TREATMENT

Preoperative treatment is important in minimizing the risk of operation. Bed rest and the forcing of fluids is necessary in all cases. When obstruction or retention is present, systematic gastric lavage for a few days previous to surgery and intravenous administration of ten per cent sugar in one per cent salt solution is important in controlling the toxemia present and improving the tone of the stomach wall. If there is severe anemia, transfusion should be done.

OPERATIVE TREATMENT

The type of anesthesia used in stomach surgery is of vital importance, because we are dealing with older people who are often poor surgical risks. General anesthesia, particularly ether, is contra-indicated in all cases. The ideal anesthesia is either spinal or local infiltration. If, however, a general anesthetic must be administered ethy-

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lene or nitrous oxide may be used. Spinal anesthesia gives complete relaxation, enables better exposure and lessens the danger of postoperative pulmonary complications.

Upon opening the abdomen a careful survey should be made of the extent and location of the growth. If the growth is movable and the normal stomach can be pulled into the field above the growth, it is resectable. In some instances, though, the growth is fixed, particularly in the ulcerative type of lesion, and mobilization and removal are possible. The liver and regional lymph glands are also carefully examined for metastasis. One should not be hasty in deciding against resection because of the enlargement of the lymph nodes for frequently the microscope shows them to be inflammatory. Involvement of adjacent lymph nodes is no contra-indication to surgery, for almost the entire gastrohepatic and gastrocolic omentum may be removed with the stomach.

The two principles involved in resection are: (1) restoring the continuity by uniting the stomach to the duodenum, and (2) closing the duodenum and uniting the remaining portion of the stomach to the jejunum.

The first successful resection was performed by Billroth, Professor of Surgery in Vienna, in 1881. He united the stomach directly with the duodenum and this is known as the Billroth I type of resection. In 1883 he modified the operation by a separate gastrojejunostomy to avoid the danger of leaking at the "fatal angle" and this is known as the Billroth II type of resection. The end of the stomach was implanted into the side of the jejunum by Reichel in 1908 and independently by Polya in 1911 and is known as the posterior Polya type. This was modified by Balfour in 1917 to an anterior long-loop anastomosis with a jejuno-jejunostomy.

The Billroth I operation has many disadvantages in that only a limited portion of the stomach can be resected. There is a tendency to leaking at the "fatal angle," tension on the suture line and a tendency to recurrence at the area of anastomosis and production of obstruction. Technically this type of resection is most difficult and suturing is often done intra-abdominally with a great deal of difficulty in obtaining good exposure.

The posterior Polya resection, I believe, has been favored by the majority of surgeons in the one-stage resections. However, if a very extensive removal is required, or the patient is of the short, stout type with a short transverse mesocolon, the anterior Polya long-loop operation is particularly indicated.

In elderly people who are poor surgical risks or in persistent high grade obstructions the Billroth II operation is preferred. However, the extent of

resection is more limited in that normal stomach above the level of the growth must be obtained for the gastro-enterostomy. With the improvement of the preoperative treatment the indications for the two-stage operation have become more limited.

The postoperative treatment consists of nothing by mouth for twenty-four to forty-eight hours, constant hypodermoclysis, 3000 c.c. in twenty-four hours, and intravenous glucose, 10 per cent if necessary, adequate sedatives and gastric lavage if there is any indication of spitting up or evidence of fluid collecting in the stomach.

COMPLICATIONS

The more common complications following resection are: acute dilatation, peritonitis, obstruction, pneumonia and duodenal fistula. Little has been written in regard to the management of duodenal fistula which is a serious condition, very difficult to handle and often leading to exhaustion and death. A small catheter placed in the wound, connected with a water hydrant suction apparatus will keep the wound dry and thus prevent digestion of the skin. This is probably the best way of caring for this condition.

RESULTS OF OPERATION

Operative mortality is not of primary importance in considering such a condition, since surgery offers the only possible chance for cure. However, by careful preoperative and postoperative management the mortality has been markedly lessened in the past decade. To set the risk on a percentage basis is hardly just in judging any individual case, since much depends upon the extent of the growth and the general condition of the patient.

END RESULTS

Finsterer (Vienna) reports 31.3 per cent of his patients free from recurrence for from five to thirteen years; Balfour reports 52 per cent alive and well in a series of one thousand patients three years after operation in whom no glands were involved, and 19 per cent in those with regional lymph gland involvement. In surveying statistics the majority claim a 10 to 15 per cent cure. Those who do succumb to the disease following surgery do not seem to have the distressing symptoms that go with the primary growth.

Palliative gastro-enterostomy does not seem to have much effect on the longevity of the patient and is only indicated in marked obstruction. The risk is almost equal to that of resection because of the poor condition of the patient.

In conclusion, I wish to emphasize the importance of early diagnosis, which means thorough investigation of patients, particularly by use of

complete roentgenologic examination, so that they may have the opportunity of a cure early in their disease at a minimum risk.

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Discussion

Dr. C. H. Cronk, Bloomfield: For a number of years I have been hearing that we must make a diagnosis of gastric ulcer in these cases. The question with me is, how? Two of the pictures thrown on the screen this afternoon were diagnosed as probable malignancy, yet after operation were shown to be benign. I want to know how we are going to make these early diagnoses. That is the question with me and has been for a long time. Every scientific means is being used, as far as I know.

Dr. Synhorst said that every case of dyspepsia should be examined carefully to find out whether or not it was malignant. Fortunately for me, it was my privilege to have been connected with one of the largest medical institutions in the United States for a number of years, where it was my duty to assist in the examination of from twenty to thirty stomachs every day. Very few of those ever showed any malignancy. I want to know how we as general practitioners out in the country are going to make an early diagnosis when our patients do not come to us when they have indigestion and dyspepsia until it is too late.

I wish during this coming year that this body of men before me, scientific medical men, would give their attention to that problem, so next year when I come back I may know how it may be solved.

SOME FUNDAMENTAL CONSIDERATIONS IN THE INJECTION TREATMENT OF HEMORRHOIDS*

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The American public is given to extremes and American physicians are part of the great Amer-

ican populace. Twenty-five years ago the injection method of treating hemorrhoids was in almost total disrepute. Today it is on the crest of the wave of popularity, and one and all are indiscriminately wielding the hypodermic syringe with great enthusiasm. As a result we are already getting a backwash of dissatisfied patients who have had a course of injections and who, because of unpleasant complications or impermanent results, are dissatisfied. These patients are coming in asking for surgical relief, being convinced that the injection method will not produce permanent results. Usually it will be found that these cases were not suitable for the injection treatment, or misled by some of the ballyhoo now appearing concerning this method the physician gave the patient about one-fourth the amount of treatment necessary to produce an actual cure. Hemorrhoids are not cured by a few injections, regardless of what anyone may say to the contrary. Unless this fact is recognized, recurrences are certain and just as certainly there will be a reaction against the use of the injection method. This would be unfortunate, for it is a really valuable method. Stripped of the extravagant claims being made concerning it and properly used in selected cases, the results are most gratifying. I have used this method for fifteen years in more than five thousand cases. As a result of this experience, I feel that I know its limitations, the complications which may arise, and what is required to get permanent results.

The only type of hemorrhoids suitable for injection are internal hemorrhoids, and in certain cases even these should not be injected. An internal hemorrhoid is distinguished by its covering. It is covered by rectal mucosa which is moist and velvety in appearance, in contradistinction to the smooth, dry appearing, squamous epithelium covering the anal and external type of pile. This difference is the only criterion which is of any value, for an internal hemorrhoid may be prolapsed or even fixed in the anal canal or outside the anus. Thus, the location of the pile does not determine its type. Aside from the pile being of the internal variety it is further necessary that it be not already fibrous and that the operator can replace it above the sphincters and make it remain in that position. Unless this is possible, injection should not be done, and surgery is the procedure of choice.

Having determined that the pile is suitable for injection, what do we expect to occur after injection? A hemorrhoid is a plexus of small varicose veins. Thus, a hemorrhoid which has been distended with blood and is very large, may be flattened down flush with the rest of the bowel wall by squeezing out the blood. The object of

*Presented before the Waterloo Medical Society, May 19, 1931.

injection is to destroy these vessels by occlusion, thrombosis or fibrosis, and thus eliminate the pile. The injection of a hemorrhoid is followed by considerable local reaction. The pile becomes enlarged and indurated and this condition may persist for from three days to four weeks, but usually lasts only a week or ten days. This reaction is the reason that the injection method is suitable only for internal piles. The explanation is simple. Inside the rectum there are few sensory nerve endings; hence, the reaction spoken of is painless. On the other hand, if a pile be situated in the anal canal or just external to it, a reaction of this kind will produce severe and persistent pain. This is not because the reaction to the solution is different but simply because it has occurred in an area rich in sensory nerve endings. Therefore, in cases where internal, external and anal hemorrhoids are present, radical cure should not be attempted by injections alone. The internal hemorrhoids may be injected but the anal and external type must be removed surgically.

There are many solutions used for the injection of hemorrhoids. I believe it makes little difference just what the ingredients are so long as the solution possesses certain properties. It should be nontoxic, irritating enough to produce marked induration, but not irritating enough to produce a slough. Any solution fulfilling these requirements is satisfactory. In my work I have reduced my solution to the following: Five and 10 per cent quinin urea hydrochlorid—usually 5; 10 and 20 per cent phenol in equal parts of glycerin and water—more often 20; 5 per cent phenol in Wesson oil. Any solution, regardless of strength, may produce complications if improperly injected.

METHOD OF INJECTION

Injection should be made with the hemorrhoid inside the rectum. This can be done through any anoscope, though I prefer one with a slot on one side. The Ives is my instrument of choice. There is no advantage in the use of any of the special syringes and needles which are recommended for this purpose. A 2 c.c. tuberculin type syringe with a 22 gauge $1\frac{1}{2}$ inch needle is satisfactory for the quinin urea or phenol solution. A 5 or 10 c.c. syringe with a 19 gauge needle is used for the phenolized oil. At the present time phenolized oil is receiving a great deal of publicity, but in so far as the treatment of hemorrhoids is concerned, I am sure its virtues are being overrated. In cases where there is a noticeable tendency toward prolapse of the rectal mucosa, I often inject this solution above the hemorrhoidal area between the mucus and muscular coats of the rectum to produce fibrous fixation between the coats, thus preventing protrusion. In the case of hemorrhoids

phenolized oil should be injected just under the mucosa covering the pile but after some experience with it I still favor the interstitial type of injection.

The theory has been advanced that if the solution be injected very deep into the pile at its upper pole, the vessel supplying the hemorrhoid will be blocked off and the hemorrhoid thus cured with one injection. Although I usually make my first injection this way it has not been my experience that one injection will produce a cure. After the first injection the pile is reinjected in those parts which are not indurated and have not shrunk down.

Amount of the Solution to Inject. If quinin urea hydrochlorid is used enough solution is injected to moderately distend the pile. This usually means 1 to 2 c.c. Sometimes more may be used but the smaller amounts are safer. With the phenol and glycerin solution, from 5 to 15 minims are used but rarely over 10. In general the phenol solutions are employed in those cases where the hemorrhoids appear to be a very vascular type or where the patient has an idiosyncrasy to quinin.

Number of Hemorrhoids to Inject. Where the patient expects to pursue his usual occupation, but one or two hemorrhoids should be injected at one time. If the complete ring be injected the pain is more severe and there is always the possibility that the patient may not be able to continue his occupation. When only one or two piles are injected pain is usually slight and transitory. There is a sensation of weight and fullness and there may be a dull ache lasting two or three hours. Anything more than this usually means that the injection has not been properly done.

Frequency of Injection and Length of Time Necessary to Cure. It has often been stated that hemorrhoids should be injected every five to seven days. This is not true. It is not a question of any definite number of days. The only reliable criterion is the condition of the hemorrhoids. The fundamental principle is that no hemorrhoid should be reinjected as long as there is any appreciable induration from the preceding injection. The induration may last for from three days to four weeks. When the induration has disappeared it is safe to inject again, but not before. If the patient is not attempting to work, four weeks may be sufficient to cure the usual case, and if the patient is going about his usual occupation, eight weeks is better and complications are less likely to occur.

COMPLICATIONS

Certain complications may occur with this method but they are at least no more serious nor probable than with surgery. I have never had a

death in my series of cases. Anyone who says, that he has had no complications has either done but few cases, or is not carefully observing his patients. The following are the most frequent complications:

Pain. Anything more than slight pain of a transitory character usually means that some acute inflammation was present at the time of injection, that the solution has been injected into the anal or external hemorrhoid, or that a slough has occurred. If an anal or external hemorrhoid is injected the pain may be extremely severe and will last from five to ten days.

Slough. This may be superficial, deep, painless or painful. Usually it is superficial and painless and the patient is not aware that a slough has occurred. It becomes manifest four or five days after injection. The reaction to the injection is such that a good leukocytic wall is present about the base of the slough so that infection of a serious nature is rare. A slough is usually caused by one of three things: the too superficial injection of the solution, the injection of too much solution, or the injection of a hemorrhoid which is still indurated from a previous injection.

Hemorrhage. Hemorrhage is almost always secondary to a slough. Many sloughs occur without hemorrhage but it is possible for a vessel to be opened up, causing a very severe and alarming hemorrhage. Usually the patient is not aware of what is occurring. The blood simply backs up into the rectum and colon until the patient feels the desire for an evacuation. He then will pass a whole basin of blood. It is possible for the hemoglobin to drop fifty or more points from a hemorrhage of this kind. When it is determined that a hemorrhage has occurred, an anoscope should be inserted without further delay and a stitch or ligature put around the bleeding point.

Abscess. An abscess may occur following injection which may be wholly within the rectum or appear as an ordinary perirectal abscess. This complication is rare and usually is the result of a slough following too deep injection. Liver abscess has been reported and is of course metastatic from infection in the injected area. This last complication was once used as an argument against the injection method but I do not believe that it is more likely to occur following injection than following operation.

Rectovaginal Fistula. Fortunately this is rare. It usually occurs where the solution has been injected too deeply or in too large quantities in cases where the rectovaginal septum has been thinned out from childbirth.

Solution Reactions. Some patients have an idiosyncrasy to quinin and may give all the symptoms

of quinin poisoning. Likewise, toxic symptoms due to phenol may occasionally occur.

In conclusion it may be said that the injection method will produce excellent results in the large percentage of internal hemorrhoids. It is important that one realize that a few injections will not produce permanent results and that disappearance of symptoms does not mean a cure. The injections should be continued until all vestige of the hemorrhoids has disappeared. In cases where anal or external hemorrhoids or skin tags are present their surgical removal is the only satisfactory method of treatment. The injection treatment is not without danger of complications and the operator should have sufficient knowledge of the method to use it properly.

BILATERAL EXTRA-UTERINE PREGNANCY; CASE REPORT*

FLORENCE D. JOHNSTON, M.D., Cedar Rapids

Multiple extra-uterine pregnancies are of three varieties: (1) Intra-uterine and extra-uterine combined; (2) multiple in one tube; (3) coincident in each tube.

In the third division there are two classes:

1. Successive. In these cases the pregnancies co-exist in each tube but one is of earlier date than the other.
2. Simultaneous. This class is much rarer than the preceding. The conceptions are of the same date although one embryo may be the older because of the prior death and cessation of development of the other embryo.

The diagnosis of simultaneous ectopic pregnancy is rarely made preoperatively. The diagnosis is somewhat easier in successive cases with rupture.

The bilateral condition is rare, but of frequent enough occurrence to call for the caution of examining the second tube before the removal of a tubal mass. Sometimes the only ovarian tissue that can be conserved is on the side of recent rupture. This was true in the case I am reporting.

A most painstaking questioning will sometimes be necessary to elicit the account of the first occurrence of pain with faintness accompanying a slightly abnormal period. With the second rupture the larger size of the embryo and of the ruptured vessels usually gives a more stormy picture. Of course in a number of instances operation has been done after the first rupture and an intact tubal pregnancy has been found in the supposedly normal side, together with the ruptured tube on the suspected side.

The mortality in cases of bilateral ectopic preg-

*President's address, State Society of Iowa Medical Women, Des Moines, May 12, 1931.

nancy coming to operation is low. Usually successive ruptures have allowed the loss of circulating blood from the first internal hemorrhage to be made up before the second rupture occurs.

The actual presence of bilateral pregnancies in a number of cases reported in the literature is questionable, since the rupture of a unilateral tubal pregnancy may occasion a contralateral hematosalpinx and this may cause torsion of the tube with rupture of the hematocele. Even the presence of decidual cells is not proof of bilateral pregnancy, since these have been demonstrated in apparently normal tubes removed at operation to prevent further pregnancies. The removal of the normal tube has been recommended where further child bearing is not an urgent desire, since the risk of a later occurrence of tubal pregnancy is about one in twenty.

Since the presence of decidual cells and a hematoma are not sufficient proof of a pregnancy in an involved tube, the criteria of bilateral coexistent tubal pregnancy are that in each tube there should be found one of the following: (1) Embryo; (2) clot and chorionic villi; (3) placental tissue and ruptured hematosalpinx not explained by torsion.

A microscopic examination gives important evidence of simultaneous pregnancy. The chorionic villi should correspond in age.

In reporting a case because of its rarity it is customary to summarize the literature to date. I am not doing this because the case I have to report is not of the rarest type. Further, one who has achieved the editorial viewpoint, frowning on unnecessary medical manuscripts, finds it impossible to burden the literature with a recapitulation of unimportant matter.

The case which directed my attention to the subject of bilateral tubal pregnancy was that of a young childless married woman who was referred to Dr. H. E. Pfeiffer of Cedar Rapids, for an operation. As I assisted in the operation I saw the interesting pathology and received permission to report the case.

CASE HISTORY

Mrs. G. T., aged twenty-four, a childless American housewife, entered St. Luke's Hospital, February 5, 1931, complaining of attacks of violent epigastric pain. The first attack occurred during the evening of January 30, lasted fifteen to twenty minutes, radiated from the epigastrium to the right side and was partly relieved by pressure. There was no nausea or vomiting. On January 31 there were numerous attacks of colicky pain. These came at shorter and shorter intervals.

For two months she had complained of weakness and fainting. The recent menstrual periods, except the last one, had been regular as to time

but with scanty flow. She had always had slight dysmenorrhea, but with the last period, which began January 13, this was severe. This period was a few days over due. On examination at the hospital there was nothing significant in the family history or any history of previous illnesses. Head, neck and thorax presented no abnormalities. Palpation revealed a tender, rigid, resistant right hypogastrium and very slight tenderness was found in the right vaginal fornix. There was slight dullness in the hypogastrium just to the right of the midline. There were 20,200 white cells per cu. mm. of blood. The temperature preoperatively was 97.8° to 99.6°; pulse 88 to 84. The blood coagulation time was three minutes, hemoglobin 70. The urine showed specific gravity 1022; acid, albumin and sugar were not present, but there was some acetone. The diagnosis seemed to be among three conditions: appendicitis, salpingitis or tubal pregnancy. Operation was done February 6.

The omentum was found infiltrated with blood. The right tube showed a recent rupture with a mass of blood clots and placental tissue. The point of rupture was about the middle of the tube. At the outer end the tube was adherent to the parietal peritoneum which was also infiltrated with blood. The left tube lay in much older blood clots and was also ruptured. There was also on the left side an ovarian cyst which seemed to have destroyed the ovary. This cyst was unilocular and thin-walled, with serous contents. There were also two small inflammatory cysts. The clots on the left side were organized and obviously considerably antedated the acute picture on the right. The appendix was normal. The cysts and both tubes were removed, the right ovary being preserved. Her postoperative course was uneventful.

Examination of the specimens showed ruptured right tubal mass with clots and apparently placental tissue 8x3 cm. Microscopically organizing blood clots and placental tissue were found involving the outer surface of the tube. On the left the ovarian cyst measured 9x6 cm. There was very little ovarian tissue left. The left tube was also ruptured. The old blood clot was organized with fibrous tissue and fibroblasts and some placental tissue.

The larger mass of placental tissue was part of the right tubal mass with the blood clots corresponding in appearance to the attack of acute pain the week previous. The rupture on the left was at least two months older, and more advanced in organization. There was no torsion to account for its rupture. After repeated questioning the patient recalled having had pelvic pain a few months previously. Hers was evidently a case of successive coexistent tubal pregnancies.

College of Medicine State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

A CASE OF RAT-BITE FEVER CAUSED BY THE BITE OF A WILD MOUSE*

HARRY R. JENKINSON, B.S., M.D., and
CARL F. JORDAN, M.D.

Dickinson has described rat-bite fever¹ as "an infectious disease following the bite of a rat, and characterized by fever, typical eruption, involvement of the regional lymphatics and prompt response to arsenicals." According to Cadbury,² it is "a specific infectious disease of wide geographical distribution caused by an infectious agent or infectious agents introduced by the bite of rats or, rarely, other animals closely associated with rats." Stewart says,³ "The condition presents a picture so definite in its outlines, and responds so promptly and favorably to the proper therapeutic measures, that it is undoubtedly a clinical entity due to a particular infective agent."

It is agreed by most students of the disease that the causal organism is a spirochete, *spirochaeta morsus munis*, which Futaki, of Japan, was first to describe, although a streptothrix has also been described. Many cases have been studied in which the causal agent has not been isolated, the diagnosis being made from the clinical picture and the history, as is true in the case we are about to present.

The symptoms of an ordinary case are quite typical. Following a history of a rat-bite, there is an interval of two to four weeks during which the bite usually heals without any difficulty. During the prodromal state, "malaise, weakness and indefinite aches and pains" may be present, "not unlike those preceding typhoid."¹ The area about the wound then becomes painful, marked swelling occurs and dark, bluish-red color appears which looks as if suppuration were taking place. If incised, only dark red blood is found. A lymphangitis appears with red streaks running along the course of the lymphatics and the regional lymph glands become palpable and very tender. There is often a chill and temperature of 103° or 104° which subsides, to be followed by a similar exacerbation in two to six days. In untreated cases, this may persist for months.

In typical cases there is a characteristic skin eruption. This is present in about two-thirds of the cases. It is a maculopapular eruption appear-

ing on the extremities and trunk during the exacerbations, varying from one to five cm. in diameter, bluish-red in color during exacerbations, and fading to a coppery color in the intervals between.¹

The urine is usually negative. There is moderate leukocytosis, often reaching 15,000 or more. A few report a positive Wassermann in these cases, but most authorities appear to doubt the connection of the Wassermann reaction with rat-bite fever.

Only minor pathologic changes are reported by the Japanese. Few patients die of the disease although some report ten per cent mortality in untreated cases. Blake¹ described pathologic changes in his case, which other investigators feel were due to causes other than rat-bite fever. The isolation of the specific spirochete is difficult but may sometimes be grown from blood culture or by inoculating laboratory animals with blood from infected cases.

The treatment by salvarsan or other arsenicals is considered by most investigators to be specific, many patients being completely cured by one dose. The disease may be prevented by prompt cauterization of all rat-bites with carbolic or nitric acid.¹

To summarize the significant points in the diagnosis of rat-bite fever, we find:

1. History of a bite which healed promptly.
2. Incubation of two to four weeks; malaise, muscle pains.
3. Redness, swelling, pain and tenderness at the site of injury, lymphangitis and lymphadenitis of regional lymphatics, exanthem, relapsing fever.
4. Normal urine findings, moderate leukocytosis.
5. Prompt response to arsenical treatment.

The case we wish to report is that of I. K., a white male of fifty-six, married, with three children living. His habits were normal except that he smoked somewhat excessively at times.

His past medical history revealed recurrent attacks of bronchitis for several years. Occasionally these were severe. When five years old, he had a severe infection of the right index finger, caused by a rat-bite. His family history was of no significance; his parents were living past the usual age.

The present illness began July 14, 1930. While searching for papers in a drawer in his desk, he was bitten on the little finger of his left hand by a mouse. The mouse was cornered and did not attack without cause. The wound bled freely, was rather superficial and healed within a few days without suppuration. No soreness followed, but he noticed that he tired easily and lacked ambition.

* From the Department of Hygiene and Preventive Medicine, University of Iowa, Iowa City.

On August 18, thirty-five days later, he noticed some redness and tenderness in the finger at the location of the bite. This was worse the following day and still worse on August 20. He was first seen at that time, and he himself thought of rabies. The finger was red, swollen and appeared to be suppurating at the site of the bite. Ethyl chlorid was used locally and a small incision was made. No pus was found. Hot boric acid dressings were applied, and he was told to remain quiet. The following day he was much worse; the finger was more swollen and of a peculiar bluish-red color with red streaks running almost to the elbow. The epitrochlear and axillary lymph nodes on the left side were palpable and very tender. His temperature was 99.2°, and pulse 100. There was slight headache, muscular aching and general malaise. Nitrous oxid and oxygen were administered and the finger again incised, but only dark blood obtained. The patient was then taken to Mercy Hospital and hot boric acid dressings re-applied to the left hand and forearm, and an ice-bag to the axilla. The white blood count was 7,000 with 56 per cent polynuclears and 37 per cent small lymphocytes. There were a few irregular, reddish blotches on the left arm and forearm, but these were attributed to hot applications.

On August 22 and 23, the highest temperature was again 99.2°, but he felt improved. On August 23, blood was drawn and transferred subcutaneously to the inguinal region of two guinea pigs. Within two weeks one of the animals developed an oval-shaped area of ulceration about 1 cm. in length by .5 cm. in width at the site of injection. This ulceration was highly suggestive of infection due to the spirochete of rat-bite fever, but the organism itself was not found. Attempts were made later, but without success, to isolate the organism by guinea pig injection with saline suspensions of macerated liver and spleen from mice caught in the room where the patient was bitten.

The Wassermann test was negative, as were tests for undulant fever, typhoid fever and tularemia.

The patient was given 0.35 gm. neosalvarsan on August 23, on the assumption that rat-bite fever was responsible for the condition. Following this, the temperature remained slightly elevated until August 27, when it reached normal and the patient felt much better. On August 29, he awakened in the night with aching in his elbows and knees and general malaise. His temperature was 99.5°, pulse 118. A second dose of 0.4 gm. neosalvarsan was given and the symptoms disappeared within forty-eight hours, with no recurrence since.

Our diagnosis in this case was based on the history of a mouse-bite which healed promptly,

inflammation, lack of suppuration, lymphangitis and lymphadenitis recurring from the site of the wound after an interval of thirty-five days, lack of leukocytosis, relapsing temperature, and prompt response to neosalvarsan treatment.

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WASHINGTON SELECTED AS PLACE FOR SIXTY-FIRST ANNUAL MEETING OF AMERICAN PUBLIC HEALTH ASSOCIATION

The 200th anniversary of the birth of George Washington will be celebrated during 1932 with appropriate ceremonies in Washington, D. C. To participate in various features of the celebration, many associations have decided to hold their annual conventions in Washington this year. The American Public Health Association, oldest and strongest organization of its kind on the continent, is one of those. Its sixty-first annual meeting will be held in Washington from October 24th to October 27th. The Willard Hotel will be headquarters.

The scientific programs are planned to interest health officers, nurses, food and nutrition experts, sanitary engineers, school physicians, directors of hospitals, laboratories and clinics, child and industrial hygienists, and specialists in all branches of public health.

The program committee will begin its work at a meeting to be held in New York early in January. The committee in charge of local arrangements has already begun to function, under the direction of the general chairman, Dr. William C. Fowler, health officer of Washington.

Additional information may be obtained from the office of the American Public Health Association, 450 Seventh Avenue, New York, N. Y.

Iowa Radiologists on National Program

Several Iowans appeared on the program of the annual meeting of the Radiological Society of North America, held in St. Louis, the first week in December. Among them were: N. G. Alcock, M.D., of Iowa City, who led a symposium on urology and presented the closing paper, X-ray in the Diagnosis of Anomalies of the Urinary Tract; Arthur W. Erskine, M.D., of Cedar Rapids, who led a symposium on apparatus, and presented the closing paper, Selection of Therapy Apparatus; Carl L. Gillies, M.D., of Cedar Rapids, who read a paper on Records in Roentgen Therapy; H. Dabney Kerr, M. D., of Iowa City, who gave a paper on Protection in Roentgen Therapy; and John F. Herrick, M.D., of Ottumwa, who delivered an address on The Radiologist as a Consultant.

STATE HEALTH COMMISSIONER'S PAGE



Dr. Stulman, M.D.



SHOULD THE GENERAL PRACTITIONER
ALSO INTEREST HIMSELF IN THE
PRACTICE OF PREVENTIVE
MEDICINE?

General practitioners of medicine may profit more than they do at present and at the same time render a greater service to the public, by adopting the practice of preventive medicine.

Owing to his knowledge of the scientific facts connected with the preparation and handling of toxin-antitoxin, smallpox vaccine and other biologicals, as well as his familiarity with their administration, the physician is properly fitted for the task of immunizing against disease.

The following figures illustrate the immeasurable benefits of preventive medicine to the public, as well as the practical benefits to the physician.

Before the state-wide campaign against diphtheria was inaugurated more than 3,600 cases of diphtheria occurred each year in Iowa. The net revenue accruing to the medical profession at

\$20* per case amounted to \$72,000. Iowa lost an average of 242 loved ones annually and spent more than \$300,000** in other expense incidental to the illness and funerals caused by diphtheria.

There are about 45,000 babies born each year in Iowa, of which approximately 2,500 die in infancy. If the family physicians would immunize each living babe before it reached one year of age, at an average of \$3, the medical profession would have an income of \$127,500 for this valuable service. This is \$55,500 more each year than they have ever received from the treating of cases of diphtheria and this service would, within a few years, practically eradicate diphtheria in Iowa.

The figures given above deal only with infants. To include pre-school and school children would probably triple the volume of work to be done.

How many infants, pre-school, and school children remain untreated in the families of your practice?

Literature for distribution is available from this Department.

PREVALENCE OF DISEASE

DISEASE—	November, 1931	October, 1931	November, 1930	Most Cases Reported From
Diphtheria	83	76	55	Cass, Polk
Scarlet Fever	201	119	256	Cerro Gordo, Polk, Woodbury
Typhoid Fever	16	25	23	Black Hawk
Smallpox	258	73	45	Cass, Pottawattamie, Sioux
Measles	13	16	12	Jackson
Whooping Cough	111	61	25	Black Hawk, Keokuk, Sioux
Chickenpox	356	126	341	Black Hawk, Des Moines, Johnson
Poliomyelitis	37	44	26	Des Moines
Tuberculosis	33	50	24	Fayette, Johnson
Syphilis	173	216	221	Johnson, Polk, Sioux
Gonorrhea	299	373	82	Johnson, Polk, Scott, Sioux

* High estimate.
** Low estimate.

The JOURNAL of the Iowa State Medical Society

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WHAT OF THE NEW YEAR?

The record for the old year has been written; the volume is complete for each of us. We are just beginning a new volume with its three hundred and sixty-six leaves upon which we will inscribe our record for 1932.

In order that we may avoid in the new year many of the mistakes which we have made in the past, it is well for us to turn backward through our chronicle for 1931 and observe alike our accomplishments, our failures, our achievements, and our disappointments. We should like our recapitulations as individuals to remain secret, since with many of us there are more pages whose sum total indicates failure or at least opportunities unrealized and goals unattained, than there are pages of achievement and worth while accomplishment. As a state medical society, we can and should view our activities of the past year, and we may do so in public, since they represent the endeavors of twenty-four hundred physicians scattered throughout the state of Iowa. As we look back over the activities created and sponsored by our society, we find that the group, like the individual, has pages of brilliant accomplishment and other pages indicating missed opportunities.

During the past six months we have attempted by editorial comment to indicate the many achievements of the various official bodies serving the Iowa State Medical Society.*

Outstanding and far-reaching in their effects are the accomplishments of the Legislative Committee in their struggle to enact legislation which would promote and protect the health of the citizenry of the state. Laws were sponsored curbing the irregular practice of medicine and the control of industrial service by corporations. The County

Health Unit law places the medical profession in a position to guide local health activities and it insures medical protection to the indigent where the Health Unit plan is adopted. Marked progress has been made in developing cooperation of lay and official health agencies with organized medicine. The problem of caring for the indigent sick has been satisfactorily met in eight additional county societies during the year by the completion of contracts with their respective supervisors.

Iowa medicine can also be justly proud of the splendid scientific programs sponsored by the Speakers Bureau; their generous acceptance bespeaks their worth. The five post-graduate courses, equal to any given in the United States, were presented in twenty-four counties. One hundred speakers were furnished to county societies for scientific programs. Fifty speakers carried messages to lay organizations. The Bureau has acted as a center for the dissemination of health information by the radio and lay press and has added very largely to the high educational and scientific atmosphere prevailing in so many of our scientific assemblages.

Our society has actively assisted in the law enforcement activities of the Department of Health, a movement which has gone far in ridding our state of the stigmata of quackery and in saving the lives of many who would have become the victims of unscientific and fraudulent practitioners.

The various officers of the society have given largely and unstintingly of their time in assisting the component societies to a healthy scientific and organizational growth. They have sown the seeds of fellowship and fraternity and cultivated the field of scientific endeavor. It would be difficult, indeed, to form any adequate estimate of the magnitude of the donation which the officers have made in time and effort so cheerfully given. The wholeheartedness of the response for service so universally met among our officary is indicative of the enthusiasm which has been manifest in every official activity of the society throughout the year.

Our record for the year is not, however, one solely of accomplishments, as might be inferred from this recount of our achievements. The year has been marked by dissension and dissatisfaction among certain members. At least three separate county societies have drawn up and endorsed resolutions unfavorable to the present program of managing society affairs and critical of our managing director. But a greater number of county societies have gone on record approving the policy of the administration and endorsing the managing director.** It is unfortunate that any dissension

* These editorials have been collected and reprinted in pamphlet form. A copy may be obtained upon request. Address The Iowa State Medical Society, 1122 Bankers Trust Building, Des Moines, Iowa.

** See Open Forum in December Journal and in this issue, page 44.

should have developed within our ranks, since our organization is one for scientific development and professional achievement. The machinery of administering towards these ends should remain secondary to the high purpose of our organization and should never be permitted to develop situations destructive of fraternalism and the nobler aims of our society. Differences have arisen within the component units of our society so that in certain counties factions have developed and fraternity has dissolved. In some sections meetings have been conducted in which but little of a constructive scientific nature has entered into the program. This is deplorable and if continued will defeat one of the highest aims of our organization.

In summarizing the year just passed, we believe that the ledger balance is by far in favor of accomplishment. We believe that the society has made progress and that many of the accomplishments of the year have been of outstanding and permanent value to the profession at large. We believe the money spent in furthering these projects has been more than justified. In facing the new chronicle for the year, we urge continued faith in the program as outlined by the leaders in our organization. We urge that nothing be done which will in any way jeopardize the fine accomplishments of the past year. The work which has remained incomplete should be prosecuted with diligence, and uniform support should be accorded every officer or committee striving to serve the common cause. *If we can maintain our objectives of scientific development, of growth in fraternity and of service to mankind*, then our difference in matters of organization, of managerial policy, of leadership, and of finances will readily be adjusted. When we close our record for the year 1932, will we be able to look back upon that record with commendable pride? Will that chronicle stand solidly for achievement and progress, a glorious year for the advancement of the principles for which we stand? This program for the new year will be possible in its attainment only with the support of all. "In union there is strength," but "A house divided against itself will fall."

A DEPARTMENT OF PUBLIC RELATIONS

"The outstanding problem of the medical profession today is how may we convey adequate scientific service to all people, rich and poor, at a cost which can be met by them in their respective stations of life."

OLIN WEST, M.D.

It has been truthfully stated that only about fifteen per cent of the population of the United States is financially able to secure proper medical at-

tention regardless of cost. Another fifteen per cent is represented in the charity group, who are amply cared for, as far as scientific medical and surgical service is concerned, by the many well organized charitable hospitals, including city, county, and state institutions. The modest incomes, in many instances, of the remaining seventy per cent—the middle class—will not permit them to pay the costs necessarily attached to the present system of dispensing scientific medical care. As a result many are attracted by the glowing promises of unscientific cults and commercial quackery.

Dr. J. Rollins French,* in a recent issue of *California and Western Medicine*, has attempted to outline a program for the California society which he believes will go far toward solving this difficult problem. He believes that since the problem has attracted the attention of the public at large, its solution must come either from the agencies of organized medicine or it will come from the organized or unorganized agencies of the laity. The problem is definitely one which affects in a most intimate fashion the practice of medicine and for this reason is one which should be solved by the medical profession.

The first requisite is a comprehensive understanding of the many phases of the problem. This information can best be obtained through the activities of a special committee operating with and for the organized medical profession as a fact-finding group. This committee should be thoroughly familiar with the activities of all allied commissions, such as the national committee at Washington investigating the costs of medical care, whose work, now in its fourth year, is perhaps the most comprehensive which has yet been accomplished. Less elaborate investigations have been made by a number of privately sponsored and privately endowed committees, as illustrated by the work of the Bassett Hospital Guild of Coopers-town, New York. The work of the national association conducted by the Bureau of Medical Economics furnishes to some extent a correlation of the investigative work completed to date and should be closely allied with the work of the state committee. Statistical investigations are available from various large industrial concerns and some of the older insurance companies have compiled extensive statistics dealing with the problem.

With this information a state committee on public relations** would be equipped to offer a constructive program to the state society. It is suggested that this program would propagate a con-

* *California and Western Med.* xxxb, No. 3, 156 (September) 1931.

** The Council of the Iowa State Medical Society created a committee on public relations at its last meeting.

structive program of publicity, disseminating information to the public about the practice of medicine, matters of public health and the business aspects of medical practice, in so far as it involves the patient's professional care, including hospitalization, his treatment, and the various forms of special therapy commonly employed. The success of the system depends largely upon the ability of the committee to educate the physicians to the importance of supporting and being advised by the organized committee on public relations. If this can be done, then medical leadership in matters pertaining to the health of the public is but a question of time.

It seems opportune that we not only continue our interest in the evolution of the science of medicine, but that we also give whole-hearted consideration to a very necessary readjustment in the art of practice. We should so mold medical traditions as to permit slight changes in the interpretation of our code of ethics, thus permitting a more flexible relation with the commercial world. Public leadership by physicians can be entirely ethical. Inform the public in a dignified manner what good service is and what it means and how and where it may be obtained, instead of allowing unscientific propaganda to mold the public mind into such a shape that it will not fit the hat of reason.

The possibilities of such a committee are indeed far-reaching. Briefly, they may be summarized as follows: The respective sections of the public relations department would assume the responsibility of properly caring for business problems; effecting commercial and lay contacts; coordinating lay and scientific activities; molding thought and leading auxiliary health movements; directing publicity and educational campaigns for the profession and the public; sponsoring and censoring general and special articles of news value; providing editorials; outlining programs for the press and county units; directing business service and research in new methods of doing and obtaining business and the best methods of dealing with other economic problems of interest to the doctors of the association; supplying the doctors and committees with information relative to the fitness of the respective candidates for public office with special reference as to how they would vote on matters of public health; investigating and advising in all matters submitted to the legislature; directing the legal aspect of business procedure of the association and doctors; furnishing information concerning malpractice, systems of collections, as well as special information for the members, upon request.

We must change our tactics from a losing battle in defense of professional egoism to an aggressive

campaign for professional leadership in the health of the public or else be prepared to lose professional independence and become followers, subservient to lay and political domination. There are many professional volunteers ready, awaiting only a well organized, modern department of our association for leadership.

THE PREVENTION OF SIMPLE GOITER

The ease and simplicity with which goiter prophylaxis is accomplished has nearly been the undoing of this very valuable procedure, according to a recent statement by the United States Public Health Service. Many persons with goiter, attracted by the apparent ease with which the malady may be prevented, have concluded that what is useful for prophylaxis of the simple form is likewise efficient as a means of treating all types of the disease. Much harm has been done by this erroneous assumption. It is necessary, therefore, to caution people that there are certain goiters which are made worse by the ingestion of iodine. Moreover, the measures that may be effective in preventing simple goiter are in no wise useful in forestalling other and more severe forms of the disease.

The following questions quite naturally arise regarding simple goiter: First, why should simple goiter be prevented? Second, is the condition more than a deformity of the neck? These reasonable questions may be answered by citing the experiences of certain foreign countries in which the disease prevails unduly. When unchecked, simple goiter is often associated with mental and physical degenerations, especially deaf mutism, feeble-mindedness, and the idiocy of cretinism. The ill effects of uncontrolled goiter are particularly severe in subsequent generations. Fortunately, the affection has not reached this degree of intensity in the United States, nor is it likely that it will reach it.

The causes of simple enlargement of the thyroid gland may be conveniently classed as immediate and remote. The immediate cause of this condition is now believed to be a complete absence or marked deficiency of the iodine necessary for the normal functioning of the gland. Anything which interferes with the intake or utilization of iodine available in normal quantities may likewise cause enlargement of the organ. Thus, infections, intoxications, faulty diets, and such periods of stress in female life as puberty, pregnancy, or the change of life, may be mentioned as remote or underlying causes of simple goiter.

The most satisfactory method of administering iodine for the prevention of simple goiter is by adapting the remedy to each person in need of it.

In this way accurate dosage and nominal supervision is insured. Obviously this method is costly and cumbersome, reaching only a small portion of those requiring the protection. In order to overcome these objections, wholesale prophylaxis by the use of iodized table salt and iodized water supplies has been suggested. While both of these methods are theoretically sound, it is not yet definitely known whether they are effective and, at the same time, incapable of causing harm to persons with existing goitrous enlargements.

It is likely that the regular consumption of foods naturally rich in iodine will aid in preventing goiter. It is known, for instance, that marine algae, deep sea fish, and crustaceans are particularly rich in iodine. But here again the uncertainty of dosage and economic factors are involved. Variations in the iodine content of food and water probably account, to a considerable extent, for the differences in goiter incidence in the United States. Until more definite knowledge becomes available concerning the value of iodized salt, iodized water, and iodized foods, it appears best to individualize in goiter prophylaxis.

Goiter prophylaxis is most telling in its effects among children between the ages of 11 and 17, especially among girls. Even more important, as has been pointed out, is the institution of appropriate prophylaxis before a person is born. Under the supervision of a skilled physician a prospective mother may receive protection not only for her own thyroid but also for the gland of the expected child. Any plan, therefore, that safeguards the thyroid gland during fetal life, adolescence, and pregnancy may confidently be expected to aid in eliminating simple goiter.

CANCER

There can be but little doubt in the minds of the students of public health that cancer presents today the outstanding problem in this field. One by one mastery has been gained over the various communicable diseases, so that nowadays the practical prevention of most of them is within the power of any society willing to spend the funds for adequate health service. As a natural result, the advances in preventive medicine and the science of nutrition, the great decline in the infant mortality rate, coupled with a falling birth rate and improved social and economic conditions, have had the effect of adding many years to the expectation of life at birth.

Yet, the bulwark of protection which advances in sanitary science have erected against the hazards of the first decades of life, seems to have preserved the individual only to subject him to a

liability of death from malignant disease which apparently has steadily increased during the period for which American vital statistics have been available; that is, since the establishment in 1900 of the registration area for deaths.

In 1900 when the registration area was first formed, the crude death rate from cancer was 63 per 100,000 population. In 1920, it was 83.4; in 1929 (the latest available figures) it was 96.1, an increase over the crude death rate of 1900 of nearly 52½ per cent.

In 1929 the total number of deaths from cancer was 111,569. This makes cancer the second most important cause of death. Heart disease alone with 245,000 deaths claimed a greater number of victims.

One of the most striking increases in the death rate has been in the so-called external forms of cancer, such as cancer of the breast and cancer of the mouth, in which, because of the superficial position, errors in diagnosis are low as compared with the possibility for error in deep-seated cancer such as those of the stomach or other internal organs.

The conclusion has been reached after careful study of statistics that in the 21-year period from 1900 to 1920, about two-thirds of the increase observed in cancer death rate of persons 40 years old and over was due to an actual increase in the mortality of the disease.

For the present it can only be assumed that the increase is bound up in some way in the extraordinarily complex development of our modern social environment. Since physical, chemical and biological processes all tend to a state of equilibrium, we may also venture to hope that the cancer death rate will not continue to grow indefinitely, but in the absence of the discovery of preventive measures will sooner or later become stabilized. The fact of this increase in the cancer death rate, however, should serve as a spur to stimulate research and to justify its extension.

DENTISTS NOW TO ADVERTISE ETHICALLY

The American Dental Association in its national convention, held at Memphis, Tennessee, October 19th to 24th, has decided to advertise. This breaks the years' old convention and the official ethics against publicity. However, the advertising will not be in any sense commercial or individualized. Instead, it will be publicity on the highest plane possible, and will be devoted exclusively to dental education.

In a letter to Dr. Martin Dewey of New York City, new president of the American Dental Association, President Hoover voiced his sentiments as approving such an advance and modern step in

favoring educational publicity, particularly as it will especially benefit the children.

This publicity will be handled by the American Dental Association through a new bureau that has been organized and which will keep the public informed on the care of their teeth, mouth hygiene, proper diet and the prevention of dental troubles. The theme of the publicity will be along the lines of prevention, and, if heeded by the public, will save the people of America millions of dollars in dental bills. Newspapers, magazines, radio and other forms of advertising media will be used in this publicity program, but in no sense will any individual dentists' names be mentioned nor fees quoted.

Such group publicity in the form of dental education was started in Little Rock, Arkansas, in August, 1930, and brought such favorable response and comments from leading dentists, educators and the press that it was decided after such a test to allow the dentists of the country to resort to similar publicity in a likewise ethical manner.

The dentists of the country have taken a forward step, the returns of which publicity will be incalculable, and thus will live up to their ethics of doing everything they can to aid humanity along the lines of dentistry.

WORK OF EMPLOYEES' MUTUAL BENEFIT ASSOCIATIONS

The marked increase in the work of the employees' mutual benefit associations is attracting the attention of persons interested in the health of industrial workers.

This survey was made for the purpose of ascertaining to what extent the employees' mutual benefit associations have gone beyond their primary function of providing certain fractions of wages when sickness causes loss of time from work, to a broader program of health improvement and a better care of their disabled members. As a whole the associations are still essentially insurance organizations, making no attempt to control either the incidence or the severity of disability afflicting their members. However, approximately 43 per cent of the associations replying reported that improvement in health had probably resulted from the work of the associations; thirty-six per cent stated that the number of absences on account of illness had been reduced. Only a small number of these attributed the reduction to a decline in the number of unnecessary absences resulting from the work of visiting nurses and investigators.

Some of the more progressive organizations are making an effort to shorten the duration of disability by assisting in provisions for adequate medical attention and nursing care. Others are giving

physical examinations and carrying on a program of health education.

The sick benefit associations in this country are not a recent development. The average age of the 312 associations which reported their age was 21 years. The largest number of associations were from 10 to 14 years old. Two per cent of those reporting had been operating over 50 years.

These associations in fulfilling their primary function of providing cash benefits seldom err on the side of over-insurance, since one-fourth of the associations pay less than \$1.00 per day, and one-half pay from \$1.00 to \$2.00 per day. The most popular rate of benefits is from \$9.00 to \$11.00 per week. Quite frequently the rate of payment to female members is considerably less than the rate paid to males.

The maximum period for which benefits may be paid varies as greatly as the rate paid. Thirteen weeks is the most frequent period, but the length of time for drawing benefits ranges from five weeks to over a year or to the full duration of disability.

Virtually no attempt has been made to insure against the uneven cost of treatment of different diseases. A case in which skill in surgery is required ordinarily receives no larger benefit than a case of chicken-pox causing absence from work for the same length of time. Probably insurance against the uneven costs of treating different diseases would help to dispel the bugaboo of unnecessary absenteeism.

Practically as many sick benefit associations are purely employee societies as cooperative organizations of employer and employee. At least 37 per cent of the reporting associations receive no financial help from the company and an additional 13 per cent receive only nominal assistance. It is interesting to note that sick benefit associations are beginning to realize that they have a bigger and broader field than merely making cash payments, namely, the discovery and correction of physical impairments; the promotion of health educational activity, especially in the hygiene of living, and better medical care when their members are disabled.

A BUREAU IN MATERNITY AND CHILD HYGIENE

At the last meeting of the Iowa Legislature, funds were appropriated in the amount of \$14,350 for the establishment of a Bureau in Maternity and Child Hygiene as a component part of the Iowa State Department of Health. This sum was augmented by an appropriation from the State University of \$5,000, making a total of \$19,350 available for the use of the new Bureau during

each-year of the present biennium. The bureau has now been established under the directorship of Clara E. Hayes, M.D. The first work of the Bureau has been to advise the physicians of the state relative to the plan and scope of the department's activity. It is interesting to note that the Bureau expects to combine an educational program conducted through the physicians, the public health nurses, and the general public with a program of medical care operated through various established avenues such as clinics and physicians devoting especial attention to obstetrics.

The Bureau has already provided a series of instructive letters to prospective mothers outlining the health measures necessary for safeguarding the health and happiness of the mother during the period of gestation and confinement. Such a program diligently pursued cannot fail to have a beneficial bearing upon maternal and infant mortality within the state. We further believe that such a program will do much to relieve the high morbidity rate resulting from negligence during gestation and confinement and that it will also add much to the sum total of happiness resulting from preparedness for their observation during these trying periods. The plan of work of the Bureau after being carefully studied by the council of the Iowa State Medical Society received the council's unanimous endorsement at its meeting on December 9th.

Inquiries or requests for information, literature or guidance in the program should be directed to Clara E. Hayes, M.D., Director, State Department of Health, Des Moines, Iowa.

CLAY COUNTY MEDICAL SOCIETY ACTIVE IN DISEASE PREVENTION

The Clay County Medical Society has become officially interested in the promotion of the health in Clay county, supporting a compulsory campaign for the immunization of school children against diphtheria and smallpox. A like attitude of sponsorship has been assumed by other county societies with eminently satisfactory results.

Attention is directed to the Clay County Society's action, since we believe that this establishes a satisfactory form for the conduct of such a project. We are glad, indeed, to add our word of endorsement to the official action of the Clay County Medical Society and other medical societies now sponsoring this work in health promotion, believing as we do that the comparatively large number of cases of diphtheria and smallpox in a state as enlightened as Iowa is disgraceful.

The text of the resolutions adopted by the Clay County Society is as follows:

"At the annual meeting of the Clay County Medical Society a resolution was adopted recog-

nizing the need for closer cooperation between the reputable medical profession and the boards of education and the school directors of Clay County in matters pertaining to the health and welfare of those who attend the public schools and authorizing the appointment, by the president, of a committee of six who were instructed to arrange for meetings with the county superintendent of schools, boards of education and school directors of the county, and to discuss with them matters of common interest and report back the results of their conferences at a special meeting of the society for such action as the society may deem proper.

"Your committee recommends:

"1. A county-wide campaign urging that protective treatments against diphtheria and smallpox be administered to all children between the ages of six months and sixteen years.

"2. That parents or guardians of children be fully advised of the desirability and safety of such preventive treatment by their family physicians and by the distribution of literature prepared by the State Board of Health.

"3. That public school teachers, parent-teachers associations, women's clubs, welfare associations, American Legion auxiliaries, ministers, the press and all others informed and interested be hereby asked to cooperate with the medical profession in disseminating knowledge that smallpox and diphtheria are preventable diseases.

"4. That the immunization be given at the office of the family physician, at home or school as seems most desirable and practical to parents and physicians and on dates agreeable to both, between January 10th and a date yet to be determined.

"5. Your committee expresses its firm belief that with proper cooperation, all pre-school and school children of Clay county can be fully protected against diphtheria and smallpox by September 1, 1932."

X-RAY PICTURE IN 1/1000 OF A SECOND

A new Westinghouse three element x-ray tube and machine makes possible the taking of an x-ray snapshot in less than 1/1000 of a second. This enables physicians to see clearly, for positive diagnosis, the inside of a human body; up to this time blurred or hidden in x-rays by the motion of the patient's muscles. This new instrument was shown for the first time at the convention of the Radiological Society of North America at St. Louis. An interesting feature of this new apparatus is that it can be operated from an ordinary house lighting circuit and in appearance resembles a large size radio tube. The method of operation is similar to water collecting behind a dam. When the accumulated electricity behind the dam is sufficient, the dam is opened, which sends the power suddenly, like a bolt of lightning, through the tube and the fast picture is produced.

The Secretary Says:

To the Members
of the Iowa State Medical Society:

This is the inevitable time of year for the secretary—no matter what his organization—to repeat the invitation, "Please pay your dues promptly."

The fact that several county society secretaries had already remitted membership payments prior to the due date, January 1, is a sign that this year may be exceptional; but in any case, I would take this opportunity to ask on behalf of the county society secretaries, the closest cooperation of the members. Help your secretary by remitting promptly.

The county society secretary is the most important individual in organized medicine. The future of medical practice depends upon him and upon what he can do, with and for you. He receives no pay except your appreciation and cooperation. He must take from his own practice and patients, the time necessary to serve you and your confreres, and to act as liaison officer between your county and others, and between your local society and the state and national organizations.

Help him. Don't take him from these larger, more important undertakings which can accomplish so much for you—don't call him from these duties to make a bill collector of him. Pay your dues today!

But I would also bespeak for the state secretary and all of the state society officers, the same cooperation. A close, critical, active interest in organized medicine on the part of every member would be the greatest boon the officers of your state society could ask for 1932. Already the year 1931 has surpassed any other in interest, activity and accomplishments. Continued interest and loyalty in 1932 will carry on to new and worth while achievements: a splendid scientific session at Sioux City, an excellent Journal, an outstanding Speakers Bureau, a sound and successful legislative program, better relationships with lay and official health agencies, and—best of all—a finer spirit of fellowship and friendliness in our daily relations and in our meetings—county, district, and state.

May I wish for our profession in Iowa and for each of you individually, a Happy New Year.

Robt. L. Parmer
Secretary.

Perkins, Haskell-Klaus Law

Suggested Amendments

In accordance with the directions of the House of Delegates, the Committee on Public Policy and Legislation having extended "an invitation to all members of the Iowa State Medical Society, to the faculty of the College of Medicine of the Iowa State University, to the Health Commissioner and the Iowa State Board of Health and to all members of the Iowa State Board of Education" to submit suggestions for modification of the Perkins, Haskell-Klaus law, and the committee having edited these suggestions in accordance with further instructions of the House of Delegates, the summary of such proposed amendments, modifications and alterations is herewith presented.

Some 2,500 formal inquiries were sent to the members of the Iowa State Medical Society and others specified in the above mentioned action of the House of Delegates, as well as to district judges, clerks of court, county attorneys and supervisors throughout the state of Iowa and to the Health Commissioner of each state in the Union. The various proposals thus secured were then carefully canvassed by the committee with the assistance of Dean Henry S. Houghton, representing the faculty of the medical school of the State University of Iowa, and these have been coordinated and classified into three main propositions, as follows:

I. Supervisors Should Find for Indigency

One of the suggestions most frequently made was that Section 4010 of the code, providing for "investigation and report by county attorney" and which specifies that he "shall make a thorough investigation of . . . the ability of the patient or others chargeable with his support to pay the expenses of such treatment and care," should be so amended that this function of investigating indigency should be transferred to the board of supervisors. Among the reasons given for such a change are the fact that the supervisors, being legally charged with responsibility for all indigents within the county, are in most cases naturally and necessarily in possession of the desired information; the further fact that in the case of persons whose status is not already known to the supervisors, that body is in the best position to secure the desired information; and finally, the important fact that the finding of indigency thus made by the board prior to commitment would be effective subsequently. This latter point is of such importance that many suggestions were made to the effect that the law should be modified to make aftercare at home a legal liability of the county whose board had previously recommended commitment. County officers, faculty members, health officers and physicians were almost unanimously in agreement on this proposition that some means should be found for coordinating the functions of determining indigency for commitment to the university hospitals on one hand and for local county aid on the other, so that the same individual might not be indigent by one standard and self-supporting by the other. This disparity and lack of coordination has caused hardships to all concerned and it is the purpose of the amendments proposed for this section to eliminate these difficulties.

A few proposals were made to the effect that modification of the law should go even further and instead of giving the board of supervisors merely the function of investigating and the power to recommend, there should be vested in the board the actual authority to make a commitment. However, as will be seen later,

this proposal would probably not be considered practicable unless the third main proposal (below) were written into the law so that the counties were paying a portion of the cost of hospitalization.

II. Two Physicians to Examine

Another suggestion which was very generally made, was that more than one physician should be required to make the "examination by a physician" and "report by a physician" provided for in Sections 4008 and 4009 of the code. The reasons for such a change are too obvious to need detailed discussion. The system in vogue in Wapello and Linn counties where a committee of the county medical society performs the function of "examining physician" was frequently mentioned as an ideal method and its successful operation cited as proof of the soundness of this proposal. While no members of the state medical society had the temerity to make such suggestions, yet others did advocate either a definite requirement that medical recommendations must be concurred in by two or more members of the county medical society, or even that the Wapello and Linn county plans should be incorporated in the law. There was, however, fairly unanimous opinion that in some way more than one physician should be required to make an examination.

III. Counties Should Share Hospitalization Costs

The proposal which will arouse widespread interest, was made almost unanimously; namely, that a part of the hospitalization costs should be charged to the county.

The exact percentage of cost, if any, which should be borne by the county is, of course, a matter for careful economic and political consideration, but the present tentative suggestion is that the state should properly pay 50 per cent of hospitalization costs and the county 50 per cent. Not only is such a plan an exact meeting halfway of the system now in operation and the recently proposed legislation, but it has several sound bases. It seems fair to assume that the two functions of the university hospitals, caring for the indigent and supplying clinical teaching mate-

rial, are equally important. If such be the case, then it is only fair that the state should bear one-half of the total expense as a legitimate and inevitable part of the costs of maintaining a first class medical college. It is equally fair that the counties receiving service should pay the remaining half of the total cost. It is estimated that this 50 per cent would amount to about \$2.25 per diem.

Another argument in favor of a division of the cost of hospitalization is the equalization of costs to the different counties. Under the present law the counties with a large population and adjacent to Iowa City are receiving much more service than they are paying for, while the less populous counties located further from the university are receiving much less service than they are paying for.

A further reason for the division of cost is the fact that there is at the present time a large waiting list of indigent patients, who have been legally committed by the counties (there were approximately 2,000 on this waiting list in June, 1930). The division of cost would reduce this waiting list materially as the hospital could be operated at capacity, instead of two-thirds capacity as at present.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following-named open competitive examination:

Junior Medical Officer (Interne)

Applications for the position of junior medical officer (interne) must be on file with the manager of the Fourth United States Civil Service District, Washington, D. C., not later than January 19, 1932.

The examination is to fill vacancies in Saint Elizabeth's Hospital, Washington, D. C.

The entrance salary is \$2,000 a year, less \$60 a year for quarters.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Applicants must have been graduated from a medical school of Class A standing, and with the degree of Doctor of Medicine, for internship not prior to January 1, 1931, and for postgraduate internship in psychiatry not prior to January 1, 1930.

Full information may be obtained from the secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city or from the United States Civil Service Commission, Washington, D. C.

LECTURES SPONSORED BY THE ACADEMY OF MEDICINE OF CLEVELAND

The Health Education Foundation of the Academy of Medicine of Cleveland is again making a contribution to the public health in this community by presenting to the public on Sunday afternoons in Severance Hall, Euclid Avenue and East Boulevard, three health lectures on subjects of interest to the general public.

Proposed Changes

The Committee on Public Policy and Legislation therefore propose three major changes in the Perkins, Haskell-Klaus law:

1. Supervisors should find for indigency.
2. More than one physician should sign the commitment.
3. Division of cost between county and state on a basis of 50 per cent being paid by the state and 50 per cent by the county.

Discussion Urged

These are being submitted to the members of the Iowa State Medical Society for your consideration. It is the hope of the Committee on Public Policy and Legislation that the proposals outlined above may receive the most careful consideration of the members of the society, that the entire matter may be freely and fully discussed in county medical society meetings, and that the delegates to the coming session of the House of Delegates shall thus be fully prepared to give this committee constructive directions as to subsequent procedure.

The schedules of lectures is as follows: Sunday afternoon, December 6th, 3 P. M., "What Science Knows About Cancer," by Elliott C. Cutler, M.D., Professor of Surgery, Western Reserve University.

Sunday afternoon, January 17th, 3 P. M., "Why Think about Eating?," by Henry J. Gerstenberger, M.D., Professor of Pediatrics, Western Reserve University.

Sunday afternoon, March 20th, 3 P. M., "Fighting Death After Forty," by R. W. Scott, M.D., Professor of Clinical Medicine, Western Reserve University; and Chief of Medical Division, City Hospital.

These lectures are made possible this year by a gift to the Health Education Foundation from the S. M. A. Corporation of Cleveland. The general subject of the talks is "A second Series on Life in a Strenuous Age."

TESTS SHOW GREAT DECREASE IN TUBERCULOSIS OF CATTLE

The success of the nation-wide campaign to eradicate bovine tuberculosis has been due largely to the determination on the part of the public not to tolerate the presence of such a dangerous livestock malady. This is the opinion expressed by Dr. A. E. Wight, in charge of tuberculosis eradication for the United States Department of Agriculture.

Referring to the results obtained by the campaign, Doctor Wight gave the following comparison: In the 15-year period ended in 1908, 400,000 tuberculin tests were applied which disclosed an infection of 10 per cent. In the year 1931 alone more than 13,000,000 tuberculin tests showed only 1.5 per cent infection. This was at the rate of more than a million tests a month and is an indication of the vast effort being put forth to conquer tuberculosis among cattle.

Speakers Bureau Activities

WOI--WSUI

At the time the last JOURNAL was published, it was announced that the Speakers Bureau was giving a series of twelve fifteen-minute weekly educational health talks over radio station WOI, at Ames. These talks began on Thursday, December 10, at 1:00 p. m., and will be continued until the end of February.

Since that time, negotiations have been completed with radio station WSUI, at Iowa City, for a similar program to be broadcast over that station. The talks over WSUI began on Thursday, December 17, at 8:00 p. m., and will be continued each week at the same hour.

This latest project of the Bureau is somewhat experimental at present, but it is hoped to make these weekly talks one of the permanent and outstanding features of the educational program of the Iowa State Medical Society. If the members will urge their patients and the people of their communities to "listen in" and write the radio stations regarding the talks, it will make it possible for the Bureau to continue broadcasting after the completion of this first series of talks.

The following information may be of aid in locating these stations: WOI, at Ames, has a frequency of 640 kilocycles, 5000 watt power, and a wave length of 468.5 meters. WSUI, at Iowa City, has a frequency of 880 kilocycles, 500 watt power and a wave length of 340.7 meters.

The American Medical Association has enthusiastically endorsed this new activity of the Iowa State Medical Society. Several letters have been received from those who have listened in and enjoyed the programs. One doctor in Nebraska writes that he feels "these talks each Thursday should be of great interest and profit to all citizens of America."

Tune in next Thursday and judge for yourself.

PLACEMENTS

Business meetings and the holiday season have caused a great decrease in the last two months in the number of speakers sent out by the Bureau.

Fayette County, Cedar Falls, Henry County and Delaware County Medical Societies held chest clinics and scientific programs in conjunction with them. Doctors John H. Peck, Des Moines; D. J. Glomset, Des Moines; C. B. Luginbuhl, Des Moines; W. M. Spear, Oakdale; B. F. Wolverton, Cedar Rapids, conducted these clinics and evening discussions.

Other County Medical Societies to whom speakers were sent were: Carroll county, W. F. Harri-man, M.D., Sioux City; Black Hawk county, D. J. Glomset, M.D., Des Moines; Wright county, A. H. Woods, M.D., and C. E. Van Epps, M.D., Iowa City; and Scott county, Donald Conzett, M.D., Dubuque.

Requests came from nine lay organizations for speakers. Doctor B. L. Eiker, Leon, spoke to the Lions Club at Indianola; William Jepson, M.D., Sioux City, to the Chamber of Commerce at Cherokee; J. E. Dyson, M.D., Des Moines, to the Windsor Parent-Teachers Association; T. U. McManus, M.D., Waterloo, to the Mason City Lions Club; Frank M. Fuller, M.D., Keokuk, to the Denmark Parent-Teachers Association; B. L. Eiker, M.D., Leon, and John H. Peck, M.D., Des Moines, to a community meeting at Mount Pleasant; W. W. Bowen, M.D., Fort Dodge, to a community meeting at Pioneer; Otto Svebakken, M.D., Decorah, to the Fayette Community Club.

Probably the outstanding meeting of the month was a joint meeting at Sioux City on December 6, of the Chamber of Commerce, Kiwanis Club, Rotary Club, Women's Clubs, and the County Medical Society. This is one of the largest lay meetings to which the Bureau has ever had the privilege of sending a speaker. T. U. McManus, M.D., Waterloo, addressed the group on "Scientific Medicine: Its Growth and Achievements."

THE OPEN FORUM

RULES FOR TAKING COD-LIVER OIL

Editor JOURNAL Iowa State Medical Society.

Since you have given space (page 704) to a brief discussion of the question, "Should Cod-liver Oil Be Flavored?" it may not be out of place to tell you that I have known the one, and only, answer for not less than sixty years. I got it, with concrete proof, from my father, Dr. John A. Young, Monmouth, Illinois, died 1874, who maintained that the "cod-liver oil habit" was easily and more effectively acquired if started aright. His rule was this:

- (1) Best quality oil, ice chilled;
- (2) A teaspoon in a glass of ice water;
- (3) When the mouth was chilled with cracked ice the ice-cold wet spoon was not more than half filled with the chilled oil, and the oil was swallowed with the residue of the cracked ice. (The nose might be clamped to entirely escape the odor, which is worse than the flavor.)
- (4) To be taken always before meals.

All of the people for whom I have prescribed cod-liver oil have been given this rule, and I can recall no instance of protest against the "medicine." Per contra, I saw two supersensitive (and skeptical) women drink the oil direct from the bottle before the "trial month" was ended.

The average tobacco user, despite preliminary stomach protests, has acquired the habit in much the same way—took it straight, no flavoring.

H. B. Young, M.D.

BOONE-STORY SOCIETY RESOLUTIONS

Whereas certain component county societies have seen fit to publicly attack the administration of the State Medical Society's affairs and even impugn the integrity of its officers;

We, the Boone and Story County Medical Societies, do hereby express our entire confidence in the said officers and approval of their administration.

Furthermore we understand that in said administration they have done neither more nor less than carry out the explicit instructions as outlined by the House of Delegates at Marshalltown in 1930.

Furthermore we feel that due to the exigencies arising from the approaching session of the state legislature, the society needs more funds to carry on its activities and thus we approve the action of the House of Delegates in asking for increased dues.

While we do not question the right of any component county society to criticise, we view with extreme displeasure the character of attack that has been made on the officers and committees of the State Medical Society.

THEREFORE BE IT RESOLVED that we express our satisfaction, not only with what has been done but the hope that they may continue with equal zeal and effectiveness in the future.

BE IT FURTHER RESOLVED that a copy of these resolutions be sent to the JOURNAL of the Iowa State Medical Society for publication.

Mark C. Jones
F. E. Powers

Bush Houston
B. G. Dyer
Committee.

The above resolutions were passed without a dissenting voice, thirty-six out of fifty members being present.

B. G. Dyer, Secretary,
Story County Medical Society.

COUNTY SOCIETIES APPROVE STATE ACTIVITIES

Several county medical societies in their annual meetings have adopted resolutions approving the present program of the state society, the increase in dues and the various activities of the society. Some of them having been forwarded for publication, appear below:

Audubon County

"RESOLVED, That the delegate to the State Meeting in Sioux City be instructed that (1) the Cass County Medical Society heartily indorses and supports the present policies of the House of Delegates and Board of Trustees of the Iowa State Medical Society, and (2) that we approve the employment of a lay Managing Director for the State Society and recommend that they retain the services of Mr. Vernon D. Blank."

Fraternally yours,
R. M. Sorensen, M.D., Secretary,
Cass County Medical Society.

Emmet County

The Emmet County Medical Society, during its annual meeting held at Estherville, December 8, 1931, after hearing the resolutions adopted by the Monroe County Medical Society, and discussing the same, resolved that the County Society write the State Society and inform them that we, as a State Society, approve of the action of the State Medical Society and that we are back of it.

It was further resolved that this Society does not approve of the article by Dr. West, of Armstrong, as found in the Open Forum of last Sunday's Register-Tribune, and that the secretary be instructed to write the State Society to that effect.

Fraternally yours,
Smith C. Kirkegaard, M.D., Secretary.

Marshall County

At the regular monthly meeting of the Marshall County Medical Society, held December 1 at the Hotel Tallcorn, the following resolution was adopted:

"BE IT RESOLVED, By the Marshall County Medical Society, that we hereby express our appreciation of the efforts of the officers of the Iowa State Medical Society in being present here this evening. Furthermore, this Society has full confidence in their administration and extends to them our cooperation in their future efforts for the betterment of medical practice in Iowa."

W. W. Southwick, M.D., Secretary.

Plymouth County

On behalf of the Plymouth County Medical Society, I have been instructed to write to the officers and manager of the State Society, commending and approving of their actions during the past year and pledging our whole-hearted support for the coming year.

Sincerely yours,
L. C. O'Toole, M.D., Secretary.

Sioux County

At the annual meeting of the Sioux County Medical Society, held in Hawarden December 10, the following resolution was adopted:

BE IT RESOLVED, by the Sioux County Medical Society that—

(1) We approve the principles of the activities of the Iowa Medical Society sincerely administered by its officers and committees; and

(2) We endorse the House of Delegates and Board of Trustees in their action of engaging a Managing Director for the Society, which office we believe is indispensable to a successful state organization; and

(3) We endorse the necessary increase in dues and look upon them as reasonable; and

(4) We believe the present system of election of officers is satisfactory, since each County Society has representation.

F. C. Bendixen, M.D., Secretary.

Wright County

We all endorse the accomplishments of the State Society and its officers and are strongly in favor of continuing the good work, even if it means more money. We feel that it is a waste of money to just pay dues in some inactive organization, and that was really the case not many years ago.

John R. Christensen, M.D., Secretary.

SOCIETY PROCEEDINGS

Allamakee County Annual Meeting

The Allamakee County Medical Society met in Waukon, Wednesday, December 2, for the annual election of officers. The results were as follows: Dr. R. J. Eischied of New Albin, president; Dr. R. R. Jeffries of Waukon, vice president; Dr. Joyce C. Schmidt of Postville, secretary and treasurer; Dr. R. R. Jeffries of Waukon, delegate; and Dr. A. R. Frederickson of Lansing, alternate delegate.

Audubon County Annual Meeting

Tuesday, December 15, the Audubon County Medical Society met in Audubon, and elected Dr. L. E. Jensen of Audubon, president for the coming year. Dr. W. H. Halloran, also of Audubon, was named vice president, and Dr. R. A. Jacobsen of Exira was reelected secretary and treasurer. Delegates are Dr. R. F. Childs of Audubon and Dr. P. E. James of Elk Horn.

Boone County Annual Meeting

The annual meeting of the Boone County Medical Society was held Thursday, December 17, in Boone, and the following officers elected to serve during 1932: Dr. A. B. Deering of Boone, president; Dr. William Woodburn of Boone, vice president; Dr. Mark C. Jones of Boone, secretary and treasurer. Dr. Jones was also named delegate, and Dr. B. T. Whitaker of Boone, alternate.

Boone-Story Societies Meet

Thursday, December 3, members of the Boone-Story County Medical Societies met in Ames for a dinner meeting, at which Charles N. McBryde, M.D.,

in charge of the Ames animal industry experiment station of the U. S. Department of Agriculture, was the guest speaker. Dr. McBryde spoke on Vaccination, and illustrated his address with lantern slides, among them an original letter by Dr. Jenner to Dr. McBryde's grandfather. Another paper, Influence of Cardiovascular Conditions in Surgery, was presented by Andrew I. Haugen, M.D., of Ames.

Bremer County Annual Meeting

The regular meeting of the Bremer County Medical Society was held Tuesday, December 15. A sumptuous banquet was served in the auditorium of the Nurse's Home at Waverly. The election of officers was as follows: Dr. E. N. Osnes of Readlyn, president; Dr. F. J. Bries of Sumner, vice president; Dr. J. E. Whitmire of Sumner, secretary and treasurer; Dr. L. C. Kern of Waverly, delegate, and Dr. F. R. Sparks of Waverly, alternate delegate. A very fine and interesting paper entitled Protein Disturbances, was read by Professor A. W. Swenson of Wartburg College. C. H. Graening, M.D., also of Waverly, then presented an instructive talk on the Practical Application of Anesthetics. Dr. Felix A. Hennessy of Calmar, councilor of the first district, discussed some of the problems facing the Iowa State Medical Society today, and a round table discussion was entered into with many questions and answers.

F. R. Sparks, M.D., Secretary.

Buena Vista County Annual Meeting

Officers elected at the recent annual meeting of the Buena Vista County Medical Society were: Dr. D. A. Herron of Alta, president; Dr. J. A. Swallum of Storm Lake, vice president; Dr. James H. O'Neil of Storm Lake, secretary and treasurer; Dr. M. A.

Armstrong of Newell, delegate, and Dr. J. W. Morrison of Alta, alternate delegate.

Butler County Annual Meeting

Tuesday, December 8, members of the Butler County Medical Society met in Clarksville for their regular annual meeting. Officers were elected as follows: Dr. E. C. Kepler of Allison, president; Dr. H. G. Evans of New Hartford, vice president, and Dr. W. E. Day of Clarksville, secretary and treasurer.

Cass County Annual Meeting

The Cass County Medical Society met in regular session in Atlantic on the evening of December 29 and the following officers were elected: Dr. H. E. Campbell of Anita, president, and Dr. R. M. Sorensen of Cumberland, secretary and treasurer. Dr. Sorensen was also named delegate, and Dr. H. D. Hully of Griswold, alternate delegate. A motion was made and carried that the annual county dues of two dollars and fifty cents be deferred for this year until such a time as, when or if needed. We have a sufficient sum in the treasury at this time to carry us through the year of 1932, and we thought that by deferring our county dues unless absolutely needed there would be less antagonism among the members concerning the raise in state dues. As it now stands our members have only to be taxed two dollars more than last year. Another motion was passed as follows: That the delegate to the state meeting in Sioux City be instructed (1) that the Cass County Medical Society heartily endorses and supports the present policies of the House of Delegates and Board of Trustees and of the Iowa State Medical Society, and (2) that we approve the employment of a lay Managing Director for the State Society and recommend that they retain the services of Mr. Vernon D. Blank.

R. M. Sorensen, M.D., Secretary.

Cerro Gordo County Annual Meeting

The Cerro Gordo County Medical Society held its regular meeting, Monday, December 14, at the Cerro Gordo Hotel in Mason City. After a six-thirty dinner, a brief business meeting was held and the following officers elected: Dr. C. W. Hubbard, president; Dr. R. E. Brisbine, vice president, and Dr. T. E. Davidson, reelected secretary and treasurer. We were very fortunate in having with us the State Secretary and Managing Director of the Iowa State Medical Society. Robert L. Parker, M.D., addressed the society on State Society Activities and Their Costs. Mr. Vernon Blank addressed the Society on Past and Proposed Legislative Activities. Dr. Wurtzer, delegate of the Society, paid tribute to these men and suggested a rising vote of thanks for their efforts and for their presence at this meeting, which was unanimous.

T. E. Davidson, M.D., Secretary.

Cherokee County Annual Meeting

Wednesday, December 2, at a meeting of the Cherokee County Medical Society, the following of-

ficers were elected for the coming year: Dr. Lester Spinharney of Cherokee, president; Dr. C. H. Ihle of Cleghorn, vice president; Dr. John M. Pope of Cherokee, secretary and treasurer; Dr. Paul E. Allen of Cherokee, delegate, and Dr. Chester H. Johnson of Cherokee, alternate delegate.

Des Moines County Annual Meeting

Dr. G. A. Chilgren was named president of the Des Moines County Medical Society at the regular meeting of that organization held Tuesday, December 8, at the Mercy Hospital in Burlington. He succeeds Dr. H. B. Young, who was elected delegate to the State Society. Drs. George L. Dixon and Carl J. Lohmann, vice president and secretary respectively, were reelected, and Dr. Lohmann was also named alternate delegate.

Dubuque County Annual Meeting

Officers elected at the annual meeting of the Dubuque County Medical Society were: Dr. John C. Hancock, president; Dr. J. C. Kassmeyer, first vice president; Dr. Frank Schroeder, second vice president; Dr. Roy I. Theisen, secretary and treasurer; Dr. J. Carl Painter, delegate, and Dr. F. P. McNamara, alternate delegate.

Hamilton County Annual Meeting

The Hamilton County Medical Society met Friday, November 27, at Webster City, and named the following officers to serve during 1932: Dr. F. F. Hall of Webster City, president; Dr. W. B. Lewis of Webster City, vice president; Dr. M. B. Galloway of Webster City, secretary and treasurer; Dr. E. F. Rambo of Stanhope, delegate, and Dr. C. J. Christensen of Jewell, alternate delegate.

Hardin County

On December 8, the members of the Marshall County Medical Society were guests of the Hardin County Medical Society at a turkey dinner given at the Hotel Winchester, Eldora, at six o'clock, with forty physicians present. The program furnished by the Marshall County Society was as follows: Common Injuries to the Knee Joint, Their Diagnosis and Management, R. E. Keyser, M.D.; Pulmonary Abscess and Bronchiectasis, the Differential Diagnosis, J. J. Noonan, M.D., and Spinal Anesthesia, J. J. Stegman, M.D. Dr. Louis Talley assisted by exhibiting roentgenographs for Drs. Noonan's and Keyser's papers.

W. E. Marsh, M.D., Secretary.

Henry County Annual Meeting

Following a dinner meeting, the Henry County Medical Society held its annual meeting at the Harlan Hotel in Mt. Pleasant, Friday, December 11. The results of the election were: Dr. E. W. Harrison of Winfield, president; Dr. E. C. Allen of Wayland, vice president; Dr. J. W. Laird of Mt. Pleasant, secretary

and treasurer; Dr. J. R. McKirahan of Wayland, delegate, and Dr. W. A. Sternberg of Mt. Pleasant, alternate delegate.

Ida County Annual Meeting

At the regular annual meeting of the Ida County Medical Society held at Ida Grove, Tuesday, December 22, Dr. Paul H. Jordan was accepted as a member in this organization by transfer from the Johnson County Medical Society. The election of officers for the 1932 term was held with the following results: Dr. T. J. Houlihan of Ida Grove, president; Dr. G. S. Millace of Battle Creek, vice president; Dr. P. H. Jordan of Battle Creek, secretary and treasurer; Dr. R. B. Armstrong of Ida Grove, delegate, and Dr. Jordan, alternate.

P. H. Jordan, M.D., Secretary.

Jackson County Annual Meeting

Dr. George C. Ryan of Maquoketa was elected president of the Jackson County Medical Society at the annual meeting of that organization held Thursday, December 3. Other officers are: Dr. J. C. Dennison of Bellevue, vice president; Dr. J. O. Ristine of Maquoketa, secretary and treasurer; Dr. F. J. Swift of Maquoketa, delegate, and Dr. E. L. Lampe of Bellevue, alternate delegate.

Jefferson County Annual Meeting

The members of the Jefferson County Medical Society recently elected Dr. C. C. Tallman of Fairfield president of the Society; Dr. H. E. Graber, also of Fairfield, vice president, and Dr. K. G. Cook of Fairfield, secretary and treasurer. Dr. I. N. Crow will represent the Society as delegate at the annual meeting of the Iowa State Medical Society next May.

Keokuk County Annual Meeting

Results of the annual election held at the meeting of the Keokuk County Medical Society, Monday, November 13, were as follows: Dr. J. A. Dulin of Sigourney, president; Dr. William Pfannabecker of Sigourney, vice president, and Dr. W. W. Stirlen of Delta, secretary and treasurer.

Linn County

Members of the Linn County Medical Society met Thursday, December 10, at the Montrose Hotel in Cedar Rapids, and the following scientific program was presented: The Therapeutic Problems of Syphilis, Paul A. O'Leary, Rochester; discussed by Drs. Jennings Crawford and E. G. Kieck of Cedar Rapids, and Harold Entz of Waterloo; and Spinal Anesthesia, C. H. Stark, M.D., Cedar Rapids.

Louisa County

The regular monthly meeting of the Louisa County Medical Society was held in the home of Dr. and Mrs. W. R. Smythe of Morning Sun, Thursday, December

10. Roy W. Tandy, M.D., furnished the scientific paper of the evening, speaking on Intravenous Therapy.

Marion County Annual Meeting

The fifty-ninth annual session of the Marion County Medical Society was held in the American Legion Club rooms, in Knoxville, Tuesday, December 8. After the six-thirty dinner, the following program was given: President's address, H. E. White, M.D.; Symposium on Ectopic Pregnancy, F. P. Ralston, M.D., of Harvey, and D. S. Burbank, M.D., of Pleasantville. The annual election of officers resulted as follows: Dr. D. S. Burbank of Pleasantville, president; Dr. F. P. Ralston of Harvey, vice president; Dr. C. S. Cornell of Knoxville, secretary and treasurer; Dr. E. C. McClure of Bussey, delegate, and Dr. H. L. Bridgeman of Knoxville, alternate delegate.

C. S. Cornell, M.D., Secretary.

Marshall County Annual Meeting

The annual meeting of the Marshall County Medical Society was held Tuesday, December 1, in Marshalltown, following the usual six-thirty dinner at the Hotel Tallcorn, and Dr. W. W. Southwick was named president for the coming year. Dr. W. A. Kauffman of State Center was elected vice president, and Dr. J. J. Noonan of Marshalltown was chosen secretary and treasurer. The new secretary will also be the delegate to the state meeting, and Dr. M. U. Cheshire will be alternate delegate.

The program of the evening was devoted to a discussion of State Society activities, presented by President Channing G. Smith of Granger, Secretary Robert L. Parker of Des Moines, Trustee E. M. Myers of Boone, and the Managing Director, Mr. Vernon Blank. The following resolution was unanimously adopted:

"Be It Resolved, By the Marshall County Medical Society, that we hereby express our appreciation of the efforts of the officers of the Iowa State Medical Society in being present here this evening. Furthermore, this Society has full confidence in their administration and extends to them our cooperation in their future efforts for the betterment of medical practice in Iowa."

W. W. Southwick, M.D., Secretary.

Mills County Annual Meeting

The December meeting of the Mills County Medical Society was held at the State Institution in Glenwood, Tuesday, December 15. George Mogridge, M.D., of Glenwood, led a discussion on The Eugenics Law of Iowa and L. A. Hollingshead, D.D.S., spoke on Dead Teeth, Their Removal Imperative. The paper of the evening was Surgical Treatment of Intestinal Obstruction, Donald Macrae, M.D., of Council Bluffs. Results of the annual election were: Dr. I. U. Parsons of Malvern, president; Dr. Edgar Christy of Hastings, vice president; Dr. James M. Donelan of Glenwood, secretary and treasurer; Dr. Parsons, delegate, and Dr. Christy, alternate delegate.

J. M. Donelan, M.D., Secretary.

Muscatine County Annual Meeting

Members of the Muscatine County Medical Society held their annual meeting at the Hotel Muscatine, Tuesday, December 22, and elected Dr. E. L. Emerson, president; Dr. B. E. Eversmeyer, vice president; Dr. C. P. Phillips, secretary and treasurer; Dr. L. C. Howe, delegate, and Dr. T. I. Wigim, alternate delegate.

E. L. Emerson, M.D., Secretary.

Page County Annual Meeting

Thursday, December 3, the Page County Medical Society met in Shenandoah, for the annual election of officers. Results were: Dr. Willis F. Stotler of Shenandoah, president; Dr. C. C. Parriott of Clarinda, vice president; Dr. H. McK. Bunch of Shenandoah, secretary and treasurer; Dr. M. O. Brush of Shenandoah, delegate, and Dr. G. A. Reuter of Blanchard, alternate delegate.

Polk County Annual Meeting

The annual meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Des Moines Club, Tuesday, December 15. A buffet dinner was served to the members and guests present. The business of the evening was the annual election of officers and resulted in Dr. Robert L. Parker being named president elect, and Dr. L. K. Meredith being reelected to the office of secretary and treasurer. Dr. S. E. Lincoln, who for the past year has served as president elect, now succeeds to the office of president, and will preside during the coming year. One hundred sixty-seven were in attendance at the meeting and it is believed that this is the largest meeting recorded in the history of the Society.

Poweshiek County Annual Meeting

The Poweshiek County Medical Society met Tuesday, December 1, in Grinnell, for the regular annual meeting. P. E. Somers, M.D., of Grinnell, read a paper on State Medicine, and Delano Wilcox, M.D., of Malcom, addressed the group on Leaves from the Notebook of a Country Doctor. Dr. O. F. Parish of Grinnell, was elected president for 1932; Dr. F. E. Simeral of Brooklyn, was named vice president; Dr. E. E. Harris and Dr. J. T. Padgham of Grinnell, secretary and treasurer respectively, were both re-elected; Dr. E. B. Williams of Montezuma was re-named delegate, and Dr. C. D. Busby of Brooklyn, elected alternate delegate.

Sioux County Annual Meeting

The Sioux County Medical Society met at Hawarden, Thursday, December 10, in the offices of Drs. Null and Gregory. Arch F. O'Donoghue, M.D., of Sioux City, gave an illustrated lecture on Compression Fractures of the Spine and Their Treatment by the Jack Method. He also gave a paper on The Rise of Skeletal Traction Apparatus in the Treatment of Fractures, Especially Comminuted Fractures. The

annual election of officers resulted as follows: Dr. G. Maris of Hull, president; Dr. William Maris of Sioux Center, vice president; and Dr. F. C. Bendixen of Ireton, secretary and treasurer. The following resolution was adopted: "Be it resolved, by the Sioux County Medical Society that (1) We approve the principles of the activities of the Iowa Medical Society sincerely administered by its officers and committees, and (2) We endorse the House of Delegates and board of trustees in their action of engaging a managing director for the Society, which office we believe to be indispensable to a successful state organization, and (3) We endorse the necessary increase in dues and look upon them as reasonable, and (4) We believe the present system of election of officers is satisfactory, since each County Society has representation."

F. C. Bendixen, M.D., Secretary.

Tama County Annual Meeting

Friday, December 18, the following officers were elected to serve the Tama County Medical Society during the ensuing year: Dr. F. T. Launder of Garwin, president; Dr. E. K. Dun Van of Chelsea, vice president; Dr. G. T. McDowall of Gladbrook, secretary and treasurer; Dr. W. C. Wagner of Traer, delegate; and Dr. Launder, alternate delegate.

Van Buren County Annual Meeting

At the annual meeting of the Van Buren County Medical Society held in Keosauqua, Thursday, December 10, the following officers were elected for 1932: Dr. Zenella Morris of Stockport, president; Dr. L. A. Coffin of Farmington, vice president; Dr. C. N. Stephenson of Milton, secretary and treasurer. The board of supervisors met with the Society and the terms of a contract for care of the indigent sick were agreed on.

Washington County Annual Meeting

The Washington County Medical Society met in regular monthly session, Tuesday, December 1, in the Courthouse at Washington. J. F. Auner, M.D., of Des Moines, held a clinic on skin diseases, five cases being furnished by local physicians. After an oyster supper, the election of officers for 1932 was held with the following results: Dr. F. M. Mahin of Ainsworth, president; Dr. E. D. Miller of Wellman, vice president; and Dr. W. S. Kyle of Washington, secretary and treasurer.

W. S. Kyle, M.D., Secretary.

Webster County Annual Meeting

The December meeting of the Webster County Medical Society was held Tuesday, December 15, at St. Joseph's Mercy Hospital. E. B. Dawson, M.D., of Fort Dodge, furnished the scientific paper of the evening, presenting a discussion on Sterility. The lecture featured methods in diagnosis of sterility in women. Many slides were used to illustrate methods and technic. There was a good discussion following

the paper. There was also a liberal discussion of the county health unit as proposed for Webster county. No formal action was taken. Results of the annual election were: Dr. J. H. Bruce, president; Dr. E. B. Dawson, vice president; Dr. J. C. Shrader, secretary and treasurer; Dr. Roland Stahr, delegate; and Dr. S. B. Chase, alternate delegate.

John C. Shrader, M.D., Secretary.

Woodbury County Annual Meeting

A social meeting of the Woodbury County Medical Society was held Tuesday evening, December 8, at the Martin Hotel ball room. Dinner at six-thirty was followed by special entertainment of music, dancing and bridge. During the evening the following officers were elected to serve during 1932: Dr. Elliott C. Cobb, president; Dr. A. C. Starrý, vice president; and Dr. R. H. McBride, secretary and treasurer.

Wright County Annual Meeting

At the recent annual election of the Wright County Medical Society, Dr. T. J. O'Toole of Eagle Grove, was elected president and Dr. J. R. Christensen, also of Eagle Grove, was elected secretary and treasurer.

Iowa Academy of Ophthalmology and Otolaryngology

Tuesday, December 1, the annual meeting of the Iowa Academy of Ophthalmology and Otolaryngology was held in Davenport, with President Gordon F. Harkness presiding. An all day program was held, and rare cases were reported to the group. Fred W. Bailey, M.D., of Cedar Rapids, presented three case reports; one on a rare oriental eye infection, one on congenital malformation of the optic disc, and one on an unusual case in which a patient had liver crystals in the eye. Wayne J. Foster, M.D., also of Cedar Rapids, read a paper on brain abscesses originating with ear infections, and F. L. Wahrer, M.D., of Marshalltown, discussed the electro-coagulation on tonsils. Following the noon luncheon at the Hotel Montrose, the program consisted of less rare cases: The Detached Retina, J. K. von Lackum, M.D., of Cedar Rapids; Extraction of a Foreign Body in the Eye, F. M. Dean, M.D., of Council Bluffs; Shingles of the Eye and Scalp, W. J. Neuzil, M.D., of Cedar Rapids; Hardening of the Ear Drum, H. M. Ivins, M.D., of Cedar Rapids.

Post-Graduate Medical Society, Southwestern Iowa

Following the post-graduate course presented at Red Oak through the Speakers Bureau last fall, the members of the course organized the Post-Graduate Medical Society. The purpose of the organization is to continue such post-graduate interest and instruction as given through the course and although no definite dates have been announced for future meetings, it is planned to convene at frequent intervals. The following officers were elected:

Dr. F. K. Burnett, president; Dr. W. S. Reiley, Red Oak, secretary-treasurer; and for the board of

directors the above two with Dr. R. L. Barnett of Atlantic, Dr. M. E. Johnson of Corning, Dr. L. T. Reed of Gravity, Dr. R. M. Chapman of Bridge-water, and Dr. H. D. Hull of Griswold.

Sioux Valley Medical Association

The annual meeting of the Sioux Valley Medical Association will be held in Sioux City, January 26 and 27, 1932. The headquarters will be at the Martin Hotel where all lectures, papers and dry clinics will be conducted. A comprehensive program has just been completed and includes the following speakers: C. A. Roeder, M.D., associate professor of surgery, University of Nebraska College of Medicine; Frank C. Neff, M.D., head of department of pediatrics, University of Kansas Medical School; Hillier L. Baker, M.D., Rush Medical College; Walter C. Alvarez, M.D., Mayo Clinic, Rochester; Louis A. Buie, M.D., Mayo Clinic, Rochester; Harry E. Mock, M.D., associate professor of surgery, Northwestern University; Phillip Lewin, M.D., Chicago; James G. Carr, professor of medicine, Northwestern University; Elmer L. Sevringhaus, associate professor of medicine, University of Wisconsin Medical School; Professor A. J. Carlson, department of physiology, University of Chicago Medical School; E. A. Doisy, M.D., University of St. Louis.

In addition there will be exhibitions of sound motion pictures depicting surgical and obstetrical operations. There will also be a business session in connection with the annual meeting and election of officers will be held.

John H. Henkin, M.D., Secretary.

Upper Des Moines Medical Society

The winter meeting of the Upper Des Moines District Medical Society was held in Spencer, Thursday, December 10. After a twelve o'clock luncheon served at the Tangney Hotel, the following program was presented: Cranio-Cerebral Injuries, Don Rodawig, M.D., of Spirit Lake; Diagnosis and Treatment of Iritis, L. H. Hill, M.D., of Estherville; Diagnosis of Encephalitis and Conditions with Allied Symptoms, C. C. Collister, M.D., of Spencer; The Treatment of Pernicious Anemia, Paul Nelson, M.D., of Ayshire. At the business meeting, officers were elected for 1932. They are: Dr. E. A. Rust of Webb, president; Dr. J. M. Skol of Spencer, vice president; and Dr. George H. Keeney of Mallard, secretary and treasurer.

Waterloo Medical Society

Two Illinois physicians, C. Anderson Aldrich, M.D., of Winnetka, Illinois, and Harold A. Bachman, M.D., of Chicago, presented papers at the meeting of the Waterloo Medical Society held Tuesday, December 15, in Black's Tearoom. Dr. Aldrich spoke on Nephritis in Children, and Dr. Bachman presented Heart Findings in Children.

AUXILIARY NEWS

Mills County

The Woman's Auxiliary of the Mills County Medical Society met Tuesday, December 15, at the State Institution in Glenwood, with President Mrs. J. M. Donelan, presiding. The program consisted of a review of a group of books, Mrs. I. U. Parsons of Malvern, and a review of *The Magnificent Obsession*, by Douglas, Mrs. J. G. McCue of Silver City. Mrs. Edgar Christy of Hastings rendered several vocal solos, accompanying herself at the piano. The annual election of officers was held and the present ones continued. Other officers besides Mrs. Donelan are: Mrs. Parsons, vice president; Mrs. McCue, secretary; and Mrs. Christy, treasurer.

State Auxiliary

The fall board meeting of the Woman's Auxiliary to the Iowa State Medical Society was held at the home of Mrs. Oliver J. Fay. Those present at the luncheon were: Mrs. L. F. Talley of Marshalltown, Mrs. Walter L. Bierring of Des Moines, Mrs. J. C. Donahue of Centerville, Mrs. E. L. Lampe of Bellevue, Mrs. P. B. McLaughlin of Sioux City, Mrs. William A. Seidler of Jamaica, Mrs. James A. Downing of Des Moines, Mrs. Channing G. Smith of Granger, Mrs. David H. Hopkins of Glidden, Mrs. E. L. Bower of Guthrie Center, and Mrs. Tom B. Throckmorton of Des Moines. Mrs. Fay, who is the chairman of the committee on revision of the constitution and by-laws, presented the work of her committee, which, with very few corrections, was accepted as the new constitution and by-laws. Chairmen of the other standing committees as announced by Mrs. Channing G. Smith, president, are: Mrs. Bower, printing; Mrs. Talley, organization; Mrs. M. N. Voldeng of Woodward, public relations; Mrs. S. E. Lincoln of Des Moines, legislation, and Mrs. Hopkins, Hygeia.

News from Other States

The interested cooperation received by the auxiliaries from the State Medical Associations in Oregon and Washington is speeding up organization in those states. Such assistance counts there as well as in Louisiana. However, good organization reports come also from California, Iowa, and Missouri. It is highly probable they, too, have interested medical associations. And doubtless good work has gone on elsewhere though not yet reported.

Excellent public relations activities and philanthropic work are reported from the Mississippi Auxiliary. A contribution of \$2,500 by the auxiliary to the preventorium fund for the sanatorium indicates an efficient financial chairman.

The auxiliary in Georgia has been inspired this year by an impressive address, "Why Have an Auxiliary," given in Savannah July 29 by Mrs. S. T. R. Revell, president-elect of the State Auxiliary. "If the object, person, or organization is

worthy, then give auxiliary service." Mrs. Revell pays deserved tribute to the Georgia medical profession in general and to certain of its immortals in particular. This fine address was printed in the *Georgia State Medical Journal* and has been incorporated in the programs of the various district meetings of the state.

The program of the auxiliary to the St. Louis Medical Society shows the year opening with a public relations luncheon, October 30, when its special guests were some sixty "welfare representatives of various women's organizations" of that city. At the March meeting, Mrs. N. R. Donnell will review "A Medicine Man in Texas," by Mrs. C. S. Red, of Houston, Texas, first national auxiliary president.

In his message to the Woman's Auxiliary to the Colorado State Medical Association, Dr. E. S. Judd, president of the American Medical Association, reminds the women of the opportunities for service to scientific medicine through their membership in lay organizations. He quotes the president of the Maine Medical Association as saying a systematic propaganda was being carried out for the purpose of promoting irregular medical practices. This is done by sending representatives to women's clubs and other organizations to disseminate the information. "If women's auxiliaries," says Dr. Judd, "will assume the responsibility of helping the members of their clubs and also the parent-teacher associations keep informed regarding the proper medical practices they could perform a great service to their communities."

Colorado is one state in which distinct service in medical legislation has been rendered by the Woman's Auxiliary to the State Medical Association.

INTERESTING NEWS

In Brief

The State University has offered to establish and conduct a clinic in mental hygiene in Davenport provided the citizens of Davenport will raise the sum of \$10,000 to be amplified by a like sum from the State University. On December 28th the Davenport Board of Education unanimously approved of the offer and the program will begin at once. It is expected that the clinic will operate for a period of five years.

The Association of American Medical Colleges has, after a study of five years, adopted a series of tests to be applied to pre-medical students before their entrance into the medical college to determine their aptitude to pursue the medical course. The tests are being given in colleges and universities throughout the state and are now required for entrance into the medical school of the State University.

At the recent meeting of the Radiological Society of North America it was developed that four of the

nineteen living signers of the charter of the society are Iowans. The Iowa members are: Dr. William W. Bowen, Fort Dodge; Dr. Thomas A. Burchman, Des Moines; Dr. Charles N. Lier, Des Moines, and Dr. Edward A. Merritt, Council Bluffs.

Dr. Leonidas Charles A. Haffner, an associate of Dr. Walter B. Coffey and Dr. John D. Humber, San Francisco "cancer specialists," has recently announced a serological test for cancer. The new test is based upon the recognition of a waste substance eliminated by the cancer cell in its growth process.

At the eighty-sixth annual meeting of the Prison Association of New York it was proposed that Sing Sing prison and the new one under construction at Attica be transformed into huge psychiatric clinics in which felons would be treated and classified to determine the work and training best suited to them.

The physicians comprising the staff of the Cedar Valley Hospital at Charles City contributed \$1,200 in professional service to the Charles City Community Relief Fund. Orders for medical service up to this amount will be honored by the staff when drawn by a member of the Relief Board.

The National Institute of Health, recently organized in Washington, D. C., is responsible for the discovery that copper exercises an inhibitory action upon the growth of cancer tissue. This observation may be of clinical importance in the treatment of this disease.

Dr. Wilder D. Bancroft, professor of physical chemistry at Cornell University, reports that Bulbocapnin, a drug made from *Corydalis*, will temporarily bring to consciousness a patient in the characteristic stupor of the mental disease cataonia.

Sponsored by the Y. M. C. A. of Ottumwa, a health organization bearing the name of "The Hygeia Club" was organized some three years ago. In announcing their winter program they note that the club has grown steadily in membership since its inception.

The University Hospital at Iowa City has recently acquired a respirator or "steel lung" for the treatment of cases requiring prolonged artificial respiration. This is the first equipment of this sort to be offered for use in Iowa.

Statisticians of the Metropolitan Life Insurance Company predict that in spite of economic depression and an influenza outbreak, the death rate for 1931, when tabulated, will be lower than ever before.

In the December issue of *Hygeia*, the health magazine, published by the American Medical Association, appears a feature article discussing the Smouse Opportunity School of Des Moines.

It is stated that during the year 1929 in the United States 18,000 to 20,000 people died from appendicitis. This death rate is twice that of England and four times that of Italy.

A clinic for the treatment of venereal disease, sponsored by the Waterloo Medical Society, has been organized in Waterloo under the directorship of Dr. F. Harold Entz.

PERSONAL MENTION

Dr. Zella White Stewart, director of the Asthma and Hay Fever Sanitarium at Iowa City, sails on January 9 for a world cruise on the S. S. *Franconia*. She expects to return June 1. During her absence no new patients will be admitted to the sanitarium.

Dr. Robert M. Lapsley of Keokuk has announced the association of Dr. T. L. McKee with him in the practice of ophthalmology and otolaryngology. Dr. McKee was graduated from the State University of Iowa College of Medicine in 1928, completed his internship in St. Luke's Hospital at Chicago, and took special work in the Brooklyn Eye and Ear Hospital.

Dr. Walter D. Abbott of Des Moines, was recently made a member of the American Medical Editors and Authors Association.

Dr. Otto O. Svebakken of Decorah, spoke at the December meeting of the Fayette Community Club on "A Health Program for Our Children."

Dr. A. S. Price of Des Moines, was recently reappointed a member of the Polk County Commissioners of Insanity by the district court judges. Dr. Price has been the physician member of this commission for twelve years, having been first appointed in 1920.

Dr. W. H. Maloy, formerly of Council Bluffs, is now in Shenandoah, where he is caring for the practice of the late Dr. J. O. Weaver. Before Dr. Weaver's death, a permanent association had been effected.

Dr. Howard L. Beye of Iowa City, delivered an address before the Men's Club of the local Unitarian Church, Thursday, December 10, speaking on "The Conquest of Cancer."

Dr. D. M. Fuiks of Manchester, has just received word that he is commissioned as a captain of the medical corps for the 54th General Hospital.

Dr. A. B. Fair, Ottumwa eye, ear, nose and throat specialist, gave the Y. M. C. A. health talk over radio station WIAS, Wednesday, December 2, discussing Sinuses.

Dr. Earl V. Andrew, formerly of Marengo, has located in Maxwell as successor to the late Dr. Peter

Joor. Dr. Andrew is a recent graduate of the State University of Iowa College of Medicine.

Dr. George A. Bairnson of Cedar Falls, addressed the members of the chemistry section of Alpha Beta Kappa science club at the Cedar Falls High School, December 10. His subject was "Chemistry in Relation to Medicine and Nursing."

Dr. P. E. Newport of Clarinda has received notice of his promotion from first lieutenant to captain in the Medical Reserve Corps.

Dr. James P. Hahn has announced his association with Dr. K. C. Peacock in Sioux City, and is limiting his practice exclusively to surgery. Dr. Hahn, who comes to Sioux City after five years of practice in Peru, Indiana, is a graduate of the University of Illinois College of Medicine.

Dr. H. L. Youtz, formerly with the Polyclinic Hospital in Des Moines, is taking over the offices in Valley Junction recently vacated by Dr. E. B. Woods.

MARRIAGES

Miss Audra Snodgrass, of Iowa City, and Dr. John Kenefick, of Algona, were married November 28, at the All Saints church in Des Moines. After a short wedding trip, the couple will be at home in Algona, where Dr. Kenefick is associated in the practice of medicine with his uncle, Dr. M. J. Kenefick.

Miss Jane Ramsey, daughter of Mrs. Elizabeth S. Ramsey, and Dr. Harry H. Dilley, both of Des Moines, were married in Newton on November 23. Dr. and Mrs. Dilley are at home at 1348 39th Street, Des Moines.

DEATH NOTICES

Little, Burton Dale, of Winterset, died December 2 at the age of sixty-two, as the result of a long illness. He was graduated in 1894 from the Drake Medical College, and at the time of his death was a member of the Madison County Medical Society.

Weaver, John Otis, of Shenandoah, died December 13, at the age of forty-four, from cerebral hemorrhage. He was graduated in 1914 from the College of Medicine of the State University of Iowa, and at the time of his death was a member of the Page County Medical Society.

CANCER RESEARCH PRIZE ANNOUNCED

A \$1,500,000 trust fund to be used for the alleviation of suffering from disease and especially for the control of cancer was created in the will of Egbert C. Fuller, Branford, Connecticut, who died March 5, 1931. The will provides for the creation of the Anna Fuller memorial prize, to be given "to such person or persons as shall at any time, within suc-

cessive periods of five years each, commencing one year after my death, make a real and outstanding contribution to knowledge on the subject of cause, care, prevention, or cure of cancer." Such awards shall not in any five-year period exceed the sum of \$25,000, and shall be given on the recommendation of the president of the A. M. A. and the deans of Johns Hopkins and Harvard University Medical Schools. The fund will be known as the Anna Fuller Fund, in memory of the donor's wife, who died from cancer.

PRESIDENT ANNOUNCES COMMITTEE PERSONNEL

The personnel of three special committees of the Iowa State Medical Society was recently announced by President Channing G. Smith.

The committee on child health and protection was provided for by resolution of the House of Delegates and the purpose of the committee is to provide a formal means of cooperating with the governor's conference on child health and protection.

The State Pharmaceutical Association joint committee was created at the suggestion of Mr. George Judisch of that organization, who in an address delivered before the House of Delegates, proposed that each society appoint a committee to cooperate in affairs of mutual interest.

The women's auxiliary advisory committee was created at the request of the women's auxiliary to assist that organization in its undertakings and to arouse interest in the auxiliary on the part of county societies. The committees are as follows:

Women's Auxiliary Advisory Committee

C. A. Boice, Chairman.....	Washington
Emil C. Junger.....	Soldier
O. A. Kabrick.....	Grandview
James M. Donelan.....	Glenwood
P. B. McLaughlin.....	Sioux City

Committee on Child Health and Protection

Fred Moore, Chairman.....	Des Moines
E. D. Plass.....	Iowa City
J. D. Boyd.....	Iowa City
Lee F. Hill.....	Des Moines
Judd Shellito.....	Independence

State Pharmaceutical Association Joint Committee

Robert L. Parker, Chairman.....	Des Moines
Thomas A. Burcham.....	Des Moines
Earl B. Bush.....	Ames

ANNOUNCEMENT OF THE AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS

Announcement has been made that the American Board for Ophthalmic examinations will hold its next examination in New Orleans on Monday, May 9, 1932. Coming as it does at the time of the meeting of the American Medical Association, it is hoped that those wishing licensure from the board will complete the necessary applications and present themselves for examination at that time.

Full information may be obtained from the secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. ARTHUR D. WOODS, State Center

DR. FRANK M. FULLER, Keokuk

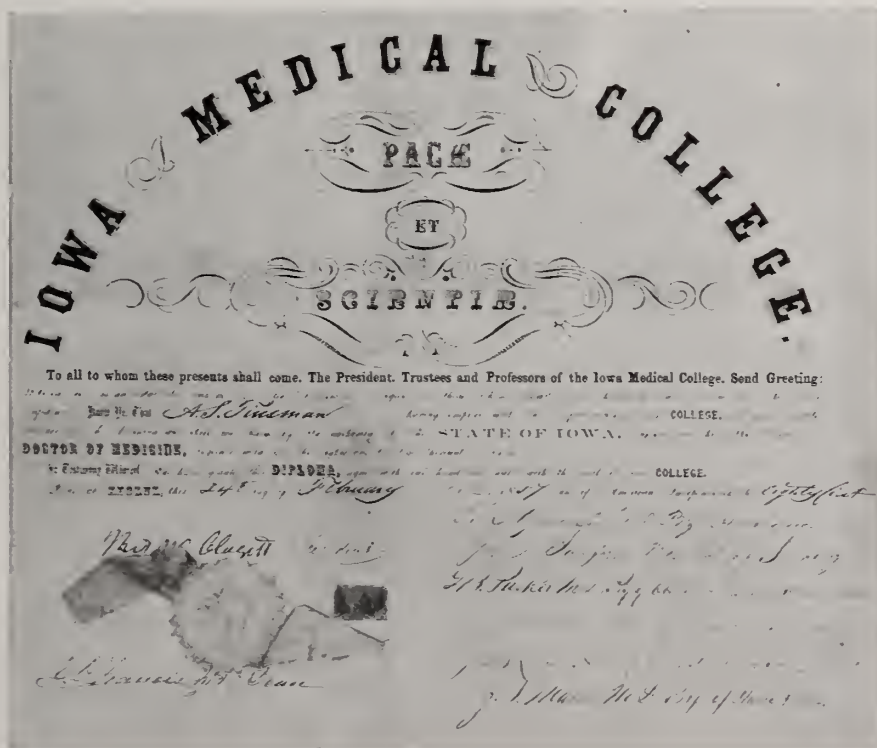
DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

Interesting Medical Diplomas

The copies of two medical diplomas presented herewith, offer several features of historical interest. They were both granted to A. S. Tinsman, the first by the Iowa Medical College of Keokuk, February 24, 1857, and the second by the University of Iowa at Keokuk, February 25, 1868.

dicating that the college did confer the degree of Doctor of Medicine, "together with all the rights and privileges thereunto belonging." The organizer of the college was probably Dr. John F. Sanford who is listed as professor of surgery, and it has been referred to as "Sanford's School."



Following are the names which appear on the diploma above: J. C. Hughes, M.D., Professor of Surgery; Geo. W. Hall, M.D., Professor of Physiology, Pathology and Therapeutics; H. S. Cleaver, M.D., Professor of Obstetrics and Diseases of Women; A. M. Carpenter, M.D., Professor of Institutes and Practice of Medicine; E. J. Gillett, D.D., M.D., Professor of Chemistry, Mat. Med. and Tox.; Edward Clapham, M.D., Professor of Anatomy and Demonstrator.

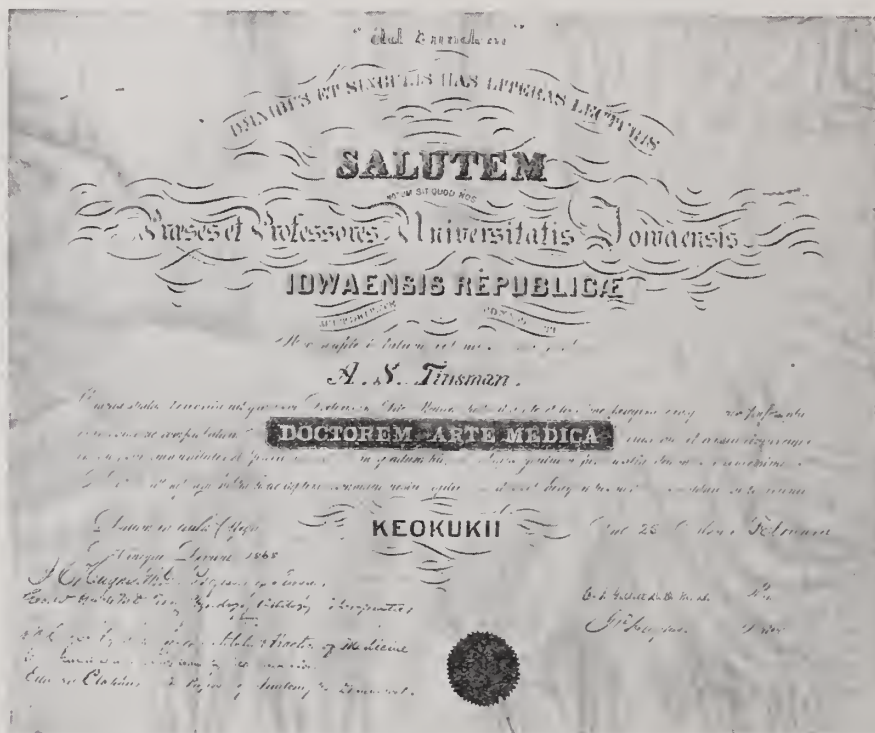
The diploma of the Iowa Medical College is printed on heavy paper and in English. The seal remains attached, and the signatures are well preserved. Very little information is available in regard to this institution. In medical circles in Keokuk doubt had been expressed as to its having existed, or that it had any graduates. The accompanying illustration will in-

The following is quoted from the History of Lee County. "The county buildings at Keokuk were originally erected about 1856 by Dr. John F. Sanford for a medical college, by whom they were sold to the county for \$14,000."

Doctor Sanford was the inspiring genius in the formation of the Iowa State Medical Society, act-

ing as chairman of the organization meeting held in Burlington, June 19, 1850. He was also, the prime mover in the organization of the College of Physicians and Surgeons of Keokuk, and the professor of surgery in that institution for four years. The rivalry with Dr. J. C. Hughes, the other prominent surgeon of that day, was probably the principal

Iowa as late as 1868. The college from its beginning in 1851 had a legal connection with the State University up to the time of the adoption of the new state constitution in 1858. At that time the University evidently did not wish to change the location of the medical department from Keokuk to an interior city, so that the College of Physicians and Surgeons



The following names appear on the above diploma: Thos. W. Claggett, President; E. C. Francis, M.A., Dean; B. F. Stephenson, M.D., Professor of Anatomy; Jno. F. Sanford, M.D., Professor of Surgery; G. B. Parker, M.D., Professor of Obstetrics and Diseases of Women and Children; John W. Bond, M.D., Professor of Prin. and Practice of Medicine; John W. Lewis, M.D., Professor of Mat. Med. and Therapeutics; J. S. Martin, M.D., Professor of Chemistry and Tox.

factor in starting another medical school in the city of Keokuk. The life of the Iowa Medical College seems to have been limited to only two or three years.

The second diploma issued to A. S. Tinsman is engrossed in traditional Latin on real sheepskin, and confers the degree of Doctorem in Arte Medica by the Universitatis Iowaensis, Keokukii, February 25, 1868. From this it is apparent, that the College of Physicians and Surgeons at Keokuk was considered the medical department of the State University of

continued a nominal connection to 1870 at which time the new medical department was established at Iowa City.

The historical committee desires to express its obligation to Dr. Eugene Tinsman of Orient, Iowa, for the privilege of publishing copies of the two diplomas issued to his father, Dr. A. S. Tinsman, and to Dr. Frank Blinn Dorsey, and Dr. Frank M. Fuller of Keokuk, for valuable historical data regarding the two medical schools concerned in this article.

THE MEDICAL SCHOOLS OF KEOKUK

The first medical school established in Keokuk was the College of Physicians and Surgeons, which graduated its first class in 1850. It had previously been located at Davenport, Iowa, under the name of College of Physicians and Surgeons of the Upper Mississippi. The last class of a graded course of three years was graduated in 1898.

The Keokuk Medical College was organized in 1890 and continued as a separate institution until

1899, when a consolidation of the Keokuk Medical College and College of Physicians and Surgeons was accomplished. This combined school continued until November, 1908, when it became affiliated with the Drake University Medical School at Des Moines.

During fifty-nine years, 1849-1908, Keokuk was a center for medical aducation and nearly thirty-five hundred physicians were graduated from the several schools during this period.

The First Practicing Physician and Surgeon of Muscatine County

Dr. Eli Reynolds, the First Doctor of Muscatine County

T. F. BEVERIDGE, M.D., Muscatine, Iowa

The first doctor of Muscatine County was Dr. Eli Reynolds. The following history regarding his birthplace, family, period of practice in Muscatine, and other incidents in his life are correct, as the dates and facts have been secured from very reliable sources.

These data were collected for me by Mrs. Flo B. Belt, now a resident of Aledo, Ill., who is a great-granddaughter of the doctor; Miss Joanna Reynolds, of Muscatine, Iowa, a granddaughter of the doctor's youngest brother; and Mr. Frank Runner, of Muscatine, a relative of the Reynolds families. Verification has been made by reference to the history of Rock Island County, Illinois, and to that of Muscatine County, Iowa, and by consultation with older living descendants of the original pioneer family.

The parents of Dr. Reynolds were descendants of the pioneer settlers near Chesapeake Bay, and both parents were born, married and lived to maturity in Maryland. William Reynolds, the father of Dr. Reynolds, was a soldier in the Revolutionary War, serving under General Washington, and the doctor remembered many incidents that his father related of this war, and of his saying that he frequently saw General Washington. The mother was Nancy Griffith, and soon after their marriage, they moved to Pennsylvania, thence to Ohio, and later to what is now Wayne County, Indiana, where both parents lived the remainder of their lives.

Dr. Reynolds was born in Washington County, Pennsylvania, and came with his parents to Ohio, and thence to Indiana. The exact date of his birth is not known; also I have not been able to learn from what medical college he was graduated, nor the date of graduation, but it is known that he began the practice of medicine in Indiana, and the monument erected at his grave in the Reynolds Cemetery, across the river from Muscatine, where members of the pioneer families and their descendants lie buried, recites that Dr. Eli Reynolds was an enlisted veteran of the war of 1812; that his death occurred April 15, 1871, and that he was 84 years of age; accordingly, the year of his birth was 1787. The stories related would indicate that he served under General William Henry Harrison, in whatever meager hospital services they possessed at that time.

The doctor's original family consisted of six brothers and two sisters, and he was the sixth in order counting from the oldest. The doctor and others of his brothers and sisters, together with the Willits and Drury families, came to the vicinity of New Boston, Illinois, in 1832. Two of the Drury brothers married the Reynolds sisters, and came farther up the river and located on the Illinois side opposite

Muscatine, and thus there came to be Drury's Landing on the Illinois side, and near by was established the Reynolds Cemetery, both original landmarks of these pioneer settlers.

Dr. Reynolds was among the contingent that came farther up the river, and in 1835 he settled across on the Iowa side in what is now Sweetland Township, Muscatine County, and chose for his location a tract of land facing the river about three miles east of the present city of Muscatine. A Mr. James W. Casey had located in this vicinity, and built the first cabin on or near the river front, and this was known for many years as Casey's Landing, and was nearly opposite Drury's Landing on the Illinois side. He Casey, was the first settler.

Dr. Reynolds called his location Geneva, and in 1836 formed a partnership with Harvey Gillett, and laid out the town site of Geneva—now extinct except for a school house by that name—and attempted to make this the county seat. He succeeded in getting a measure passed in the Legislative Assembly at Burlington during the session of 1836-7, making Geneva the county seat, but this measure failed to secure the signature of Governor Dodge. Muscatine County was organized by the Wisconsin Territorial Legislature, and Bloomington—now Muscatine—was made the county seat on January 8, 1837, and thus Dr. Reynolds lost out in one of his first ambitious ventures. Settlers came rapidly for a new country, and by 1838 there were 1,247 inhabitants in Muscatine County. These were interesting times for the first settlers, meeting new emigrants, making plans, starting new ventures, and watching a new community grow.

History indicates that Dr. Reynolds was enthused and very active in the development of his community. He initiated or assisted in establishing a number of the first industries in the county. He assisted in financing the erection of the first grist mill at Pine Creek, now an old landmark near the new State Park, Wild Cat's Den. He, with a partner, built and operated the first steam saw mill in the county. He was a member of the first law-making body of what is now the State of Iowa, which assembled at Burlington on October 25, 1836.

Mr. E. A. Allbee, formerly county superintendent of schools of Muscatine County, and now over 80 years of age, tells me that when he was a boy about 10 years of age he remembers seeing Dr. Reynolds making calls, and that he was a very old man with a peculiar shaking movement of his head—no doubt a senile tremor. He was described as a man of very positive character, but of kindly disposition, and was an outstanding personality in his community.

In those days, whiskey was as free and common a commodity as the tobacco they used in their pipes, and it was a common practice to greet callers and friends with a drink of whiskey. It is said the doctor always enjoyed these friendly greetings.

Many anecdotes are related of the happenings of these early days. One of them was that a man in a distant part of the settlement sustained a fracture and severe injury to his leg. They sent a messenger to find the doctor on his rounds, and instructed the messenger to ask the doctor how to care for the man until he came—that they had bound up the wounds and were soaking the bandages with whiskey. The doctor sent back word that they were treating the patient all right, but “for God’s sake not to use up all the whiskey before he got there.”

Like a typical pioneer who endured the hardships of the early days, and carried on successfully, he was more rugged than polished, but those who knew him, uniformly testify that, while the methods of medical practice were crude in those days, as compared with the present, he was always well abreast of the progress made, and ever endeavored to sustain an honorable reputation in the profession he loved, and which he practiced for an unbroken period of fifty-six years.

FIFTY YEARS OF PRACTICE IN IOWA

A. G. SHELLITO, M.D., Independence
1882-1932

Doctor Amos G. Shellito was born in Espyville, in western Pennsylvania, August 20, 1860. He was the third of eight children born to George and Amanda Shellito, seven of whom were boys. He attended the country school and from the age of fourteen largely supported himself. Preparatory to his medical studies, he attended the Meadville Academy at Meadville, Pennsylvania, after which he taught school for a time. He matriculated in medicine with the College of Physicians and Surgeons of Baltimore and was graduated in 1882. His first experience in practice was in the office of a physician in the western part of that state, which in those days was a highly prized experience.

An older brother, A. M. Shellito, well known to this community, had come west and located in Independence for the practice of law. He invited his physician brother to come to Iowa, which he did, locating in Independence in 1882, which has since been his home. His efforts in the field of medicine have been awarded with unusual success and his keen judgment and broad knowledge of medicine, attained by constant study and the putting into practice that which he learned, has qualified him as the Dean of Medicine in this part of Iowa.

From 1891 to 1898, he was associated in practice with the late Doctor Robert E. Buchanan, under the firm name of Shellito & Buchanan. Since 1903, he has had as an associate Doctor Fred F. Agnew, the firm being known as Shellito & Agnew. In 1917 his son, Doctor Judd Campbell Shellito, and Doctor



Charles W. Tidball were taken into the firm which still remains active as a group. Doctor Shellito still remains the active head of this group and is on the job every day.

The doctor has always taken an active interest in the affairs of the community and has earned an enviable reputation as a business man. He enjoys the outdoors and when there is a leisure time, is frequently seen chasing the elusive pill around the golf course. He maintains membership in his County and State Medical Societies and in the American Medical Association; is President of the Board of Trustees of the Peoples Hospital in his home city; and is also President of the Buchanan County National Bank. In all of these, he exhibits a keen interest.

The Buchanan County Medical Society has chosen this, the end of his fiftieth year in active practice, to do him honor, and the December meeting is to be devoted to this program. It is the hearty wish of all that he may; as was the toast of America’s most famous stage artist, “live long and prosper.”

F. F. Agnew, M.D.

Burcham Officer of Radiological Society

Iowa has been signally honored by the selection of Dr. Thomas A. Burcham of Des Moines, to serve on the executive committee of the Radiological Society of North America. This appointment took place at the annual meeting of that organization held recently in St. Louis, Missouri.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ALLERGY AND APPLIED IMMUNOLOGY—(A Handbook for the Physician and Patient.) By Warren T. Vaughan, M.D. 359 pages, illustrated. The C. V. Mosby Company, St. Louis, 1931. Price, \$4.50.

***BULLETIN OF THE NATIONAL RESEARCH COUNCIL**—Number 83. A Compendium of the Statute Law of Coroners and Medical Examiners in the United States. By George H. Weinmann. Issued under the auspices of the Committee on Medicolegal Problems, National Research Council. Published by the National Research Council of the National Academy of Sciences, Washington, D. C., 1931. Price, \$3.00.

***MEDICAL CLINICS OF NORTH AMERICA**—(Mayo Clinic Number, July, 1931.) Volume 15, Number 1. (Issued serially, one number every other month.) 263 pages with 56 illustrations. Per clinic year, July, 1931 to May, 1932, Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London, 1931.

***MODERN PROCTOLOGY**—By Marion C. Pruitt, M.D., L.R.C.P., S., F.R.C.S., F.A.C.S., Associate in Surgery, Emory University School of Medicine. 494 pages with 233 illustrations. The C. V. Mosby Company, St. Louis, 1931. Price, \$8.00.

University of Pennsylvania. Third edition, entirely reset. 1,150 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$8.00.

***THE PRACTICE OF MEDICINE**—By A. A. Stevens, M.D., Professor of Applied Therapeutics, University of Pennsylvania. Third edition, entirely reset. 1,150 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$8.00.

***PROCTOSCOPIC EXAMINATION AND THE TREATMENT OF HEMORRHOIDS AND ANAL PRURITUS**—By Louis A. Buie, B.A., M.D., F.A.C.S., Associate Professor of Surgery, The Mayo Foundation, University of Minnesota. 178 pages with 72 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$3.50.

***SURGICAL CLINICS OF NORTH AMERICA**—(New York Number, June, 1931.) Volume xi, No. 3. 239 pages with 73 illustrations. (Issued serially, one number every other month.) Per clinic year (February, 1931 to December, 1931) paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London, 1931.

**Review appears in this issue.*

BOOK REVIEWS

BULLETIN OF THE NATIONAL RESEARCH COUNCIL

Number 83. A Compendium of the Statute Law of Coroners and Medical Examiners in the United States. By George H. Weinmann. Issued under the auspices of the Committee on Medicolegal Problems, National Research Council. Published by the National Research Council of the National Academy of Sciences, Washington, D. C., 1931. Price, \$3.00.

This volume covers the ordinary laws regarding (1) Selection, Qualification, and Tenure of Office of the Coroner, (2) Deputy Coroners, (3) Powers and Duties of the Coroner, (4) Compensation and Fees, (5) Medical Examiners. These laws are arranged according to states and insular possessions.

It would serve as a continuation of "The Laws Regarding Dead Human Bodies," published by the National Research Council last year, devoting exclusive attention to the affairs of coroners.

D. M. B.

MEDICAL CLINICS OF NORTH AMERICA

(Mayo Clinic Number, July, 1931.) Volume 15, No. 1. (Issued serially, one number every other month.) 263 pages with 56 illustrations. Per clinic year, July, 1931 to May, 1932, paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London, 1931.

This volume has been prepared by the medical staff of the Mayo Clinic and presents many phases of medical diagnosis. Particular attention has been devoted in the volume to a discussion of diseases af-

fecting the alimentary tract such as Carcinoma of the Stomach with Cerebral Metastasis, Syphilis in the Upper Part of the Abdomen, Perforating Gastric Ulcer, Hour-Glass Stomach with Benign Gastric Ulcer, Duodenal Ulcer, Hydatid Disease of the Liver, etc.

Outstanding in the volume is the clinic presented by Rowntree and Kintner entitled, "Some Problems in Clinical Diagnosis," in which a number of case histories with obscure or confusing symptoms are carefully analyzed. This volume is illustrated.

MODERN PROCTOLOGY

By Marion C. Pruitt, M.D., L.R.C.P., S., F.R.C.S., F.A.C.S., Associate in Surgery, Emory University School of Medicine. 494 pages with 233 illustrations. The C. V. Mosby Company, St. Louis, 1931. Price, \$8.

Most modern teachers of clinical medicine have stressed the importance of routine rectal examination as a part of all physical examinations. More recently it has been urged that this examination should also include, in all cases of rectal or gastrointestinal disease, a proctostatic examination by means of a proctoscope. While this subject has been treated by a number of authors in journal essays or in brief chapters in connection with texts upon gastro-enterology, to our knowledge, this is the first volume which adequately discusses in monograph form the many phases of proctologic examination and treatment. This volume discusses not only the methods of routine examination, but the various forms of special examination required in rectal disease. A chapter is devoted to anesthesia and a second chapter to congenital deformities. Constipa-

tion, fistula, hemorrhoids, pruritus ani, stricture, tumors, and injuries are each discussed in appropriate sections. The entire volume is well illustrated with original photographs and schematic drawings.

THE PRACTICE OF MEDICINE

By A. A. Stevens, M.D., Professor of Applied Therapeutics, University of Pennsylvania. Third edition, entirely reset. 1,150 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$8.00.

This text, now in its third edition, has been prepared by a well known authority primarily to serve as a textbook for medical students. Its general plan of composition follows rather closely the highly approved form established by the late Sir William Osler, whose textbook in medicine was universally accepted as a standard work. The individual diseases are discussed from the standpoint of history, etiology, morbid anatomy, diagnosis and treatment. The text is written in a concise and forceful manner and brought entirely up-to-date in the present revision. This treatise is particularly adapted for classroom work because of its wide scope and the thorough treatment of each condition discussed. As a reference work for the practicing physician it should meet with hearty approval. The volume is adequately indexed for ready reference.

SURGICAL CLINICS OF NORTH AMERICA

(Mayo Clinic Number—August, 1931)—

Vol. xi, No. 4.—(Issued serially, one number every other month.)—211 pages with 74 illustrations.—W. B. Saunders Company, 1931.—Per clinic year, February, 1931 to December, 1931—paper, \$12.00; cloth \$16.00.

This number is concerned chiefly with reports of rare surgical conditions. Each condition discussed is well illustrated by detailed case reports.

Geo. M. Higgins and Ralph G. Mills present an interesting report on "Drainage of Lymph from the Diaphragmatic Pleura into Retroperitoneal Spaces," and demonstrate what they call a curious and apparently unphysiologic connection between the thorax and the abdomen which is probably responsible for the interchange of infection and tumor cells, thus explaining certain peculiarities in the spread of these infectious agents.

John S. Lundy reports their experience with sodium ethyl barbiturate (Nembutal) in more than two thousand cases and concludes that it has value in preoperative medication to control nausea of pregnancy. He also concludes that sodium amytal is one-third to one-half as potent as Nembutal, the effect more obvious in large than small doses.

F. W. F.

SURGICAL CLINICS OF NORTH AMERICA

(New York Number—June, 1931)—Volume xi, No. 3—239 pages with 73 illustrations.—(Issued serially, one number every other month.)—Per clinic year (February, 1931 to December, 1931) paper, \$12.00; cloth, \$16.00.—W. B. Saunders Company, Philadelphia and London, 1931.

This number contains a rather general review of common surgical subjects.

The most important part of the number consists of the reports of the clinical meeting of the New York fracture committee of the American College of Surgeons, with the reports of various clinics by: Dr. Charles L. Scudder, Dr. William Darrach, Dr. Royal Whitman, Dr. Seth. M. Milliken, Dr. Fenwick Beekman, Dr. Leo M. Davidoff, Dr. Walter E. Swift, and Dr. S. P. Bartley.

These various clinics cover the subjects of: Open Treatment of Fractures, Methods of Treatment, Abduction Treatment of Fracture of the Neck and of the Femur, Care of Compound Fractures, Fractured Skulls, Pathology and Treatment of Fractured Spine, Pelvis, Patella, Os Calcis and Shaft of the Femur, and Emergency Treatment of Fractures.

F. W. F.

PROCTOSCOPIC EXAMINATION AND THE TREATMENT OF HEMORRHOIDS AND ANAL PRURITUS

By Louis A. Buie, B.A., M.D., F.A.C.S., Associate Professor of Surgery, The Mayo Foundation, University of Minnesota—178 pages with 72 illustrations.—W. B. Saunders Company, Philadelphia and London, 1931.—Price, \$3.50.

This book is a very valuable production. Since the injection method of treating hemorrhoids has become popular, a greater interest on the part of the general profession has been taken in proctology. As any new method of treatment tends to gain considerable popularity because of its newness, there is need for sound advice to keep the judgment of all in balance. This book fills that need. It covers in detail the examination and treatment, both surgical and non-surgical, as suggested by the subject.

The book is smoothly and intelligently written and interesting throughout. It is worth more than its price to any one who treats rectal diseases.

C. A. S.

DEAN LONG RESIGNS

Recently Governor W. H. ("Alfalfa Bill") Murray, of the state of Oklahoma, issued an order giving chiropractors of the state full privilege to the University Hospital. This action upon the part of Governor Murray created much discussion, both in lay and professional groups. The immediate result of this action at the University of Oklahoma was the resignation of Dr. Leroy Long, dean of the School of Medicine. We appreciate fully the attitude taken by Dr. Long, but do not believe that citizens of Oklahoma will generally support their governor in either his action towards the University Hospital or in permitting the resignation of Dean Long.

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No. 2

SURGICAL CLINICS*

D. C. BALFOUR, M.D., Rochester, Minnesota

I appreciate very much the type of patients the local committee has selected. There are three patients, all representing various phases of a very common, chronic disease, namely, duodenal ulcer.

Case 1: The first patient represents a typical case of duodenal ulcer.

Dr. John B. Synhorst, Des Moines: Here is a man thirty-five years of age, married, a restaurant worker. His family history is negative. His mother and four sisters are living and well. Two brothers died accidental deaths. His past history is negative except for scarlet fever and pneumonia, measles and whooping cough. A herniotomy was done in 1916, and his tonsils were removed at the same time. He complains of pains in the epigastrium.

His present illness started five years ago with attacks of epigastric discomfort over periods of three to four weeks, and pain three to four hours following meals, relieved by food and soda. Acid foods were poorly tolerated.* Occasionally he had a severe attack of pain in the epigastrium, lasting ten to twelve hours. He stated that the attacks were so excruciating they would cause him to double over and would sometimes last an entire night.

Of late the pain has been more severe and is worse about one hour following meals. Physical examination is essentially negative except for some dental infection and tenderness about two inches below the umbilicus, and some suggestion of a mass at times. Extremities are negative and the reflexes normal.

The total acid content of the stomach was 53 per cent, free hydrochloric 39 per cent. Smears were positive for blood. Urinalysis showed clear, amber, acid urine; specific gravity 1.029; no sugar, no albumin. Hemoglobin was 70 per cent; the leukocyte count 5,000; Wassermann negative, x-ray diagnosis was peptic ulcer with diverticulum.

Dr. Balfour: I think it is perfectly obvious that this man presents a history which, even without general or roentgen-ray examination, makes one feel confident that he has a peptic ulcer. The reason for this is, the intermittency of symptoms and their entire dependence on food. We can

therefore assume that he has peptic ulcer. His acids, however, are lower than is usual in duodenal ulcer. There are certain important facts which should be pointed out. In the first place, his occupation is a significant factor. Such patients, in my experience, are extremely difficult to cure by any medical means, either because of the character of food to which they have such easy access, or their long hours. We have seen a great many patients of this type who, because of such occupations, have not been able to control the disease.

The general appearance of this patient is not good. He does not look like a well man. I presume this is due largely to loss of sleep and severity of pain. The decision as to the best method of treatment in a case of this type is, I think, fairly easy, because the ulcer has been present for five years, and Dr. Synhorst says the pain is becoming worse and there are evidences of obstruction. The occasional suggestion of a mass in the abdomen may be from a spasm of the antrum.

The indications are that the safest course of action is surgery. What should be done with a patient of this type? Each case may present such variations that no one surgical procedure can be decided on previous to operation. I would judge that this man, with his low acids and with his severe trouble, has a subacute perforating type of ulcer which will probably be associated with a great deal of induration around the duodenum; thus the stage is set for gastro-enterostomy. However, this might not prove to be true. It might be found that the ulcer could be excised easily with a good plastic procedure on the stomach. Our experience, however, with this type of individual (a man who has had severe pain over a long period of time and who apparently has had some leakage at the side of the duodenum) has been that they do not get along as well with a plastic operation as with a gastro-enterostomy. These are the only types of operation that should be performed.

This patient has one condition Dr. Synhorst mentioned which is of particular interest. In the roentgenogram there is a little pocket outside the duodenum which has been reported as a diverticulum. Diverticulum of the duodenum may be put

* Presented before the Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

down as of no surgical significance, because the true diverticulum apparently always occurs in the second portion, and those in the first portion are false. This pocket, therefore, may be disregarded, except that a good plastic operation may be impossible because of the presence of this diverticulum.

Summarizing this case, the patient has had prolonged trouble, he is obviously sick, and it will be extremely difficult for him to carry on routine medical treatment. After all, the important thing is, how much can the patient cooperate with the physician, even though he has good intent? Although this patient is just working part time, at present five hours a day, in ordinary times a man who works in a restaurant certainly is working more than five hours. The easy access to greasy foods and rather rich foods affords a problem. I feel that this man has had sufficient trouble to make operation advisable and he should get an excellent result from the operation.

Case 2: The second patient is a man who has undergone operation. His case illustrates one of the common complications of duodenal ulcer.

Dr. Lester D. Powell, Des Moines: This man is single, thirty-nine years old, and has had stomach trouble for the past twelve or thirteen years. It began when he was in the army in France. At that time he had gnawing pains two to four hours after meals, relieved by food and soda. They were intermittent in character. A diagnosis of appendicitis was made some ten or twelve years ago and he was told that he might outgrow the pains. Since that time he has had intermittent pains, which have been worse with indiscretions. He has used liquor moderately, and he has been a heavy user of cigarettes.

Since returning from France he has been a truck driver. On the eighteenth of last month he got up and went to work. About eight-thirty he began to feel bad. About eleven o'clock he had a severe, stabbing pain in the abdomen which forced him to lie down. He was rushed to the hospital as an emergency case, and at that time he had a blood count of 13,600 and a board-like abdomen. Definite diagnosis was not made but an exploratory operation was advised, and his abdomen was opened immediately. That was about five hours after his sharp attack. A perforation was found in the first portion of the duodenum approximately the size of a lead pencil, through which was oozing some home brew and some white material which he called "Tummies." I do not know what they are. He has been using those different types of things, and also aspirin. At the time this opening was found in his stomach it was closed crosswise and a piece of omentum patch placed over that. Because of the fluid in the abdomen, he had a stab wound placed in the lower abdomen for drainage. Twelve days following his operation he was out of the hospital, and he is now as you see him.

Dr. Balfour: There are some very interest-

ing points about this case. In the first place, the perforation apparently occurred after abuse of the stomach, by overloading. I do not know whether the aspirin had anything to do with it or not. I heard a slogan the other day given by a vaudeville performer, "No matter what they have got, give them aspirin." That may have been applied here. Occasionally perforations will occur after overloading of the stomach, simply from distention. It is perfectly reasonable that they should.

Dr. Powell has remarked that a diagnosis was not made before operation in this case. The examining surgeons simply recognized that some catastrophe had happened in the abdomen, and the quicker they got in to find out what had happened and fix it, the better for the patient. These patients can be saved if that fact is recognized and acted on early. This point is something that should be repeated and emphasized to the younger members of the profession; that is, that perforation is easily handled in the first few hours. Prompt action is more important than waiting for final consultation with the senior surgeon. It has often been said that it is much better to have a man with little experience operating on perforations early than it is to have a man with very extensive experience operating on perforations late.

The method of handling the case at the operating table I presume would be to close the perforation, cover with omentum and put in drainage. One must add drainage for one's own peace of mind; otherwise, if the patient does not get well, one wonders if he would have recovered if drainage had been instituted. As a matter of fact, there are large series of cases in which drainage has not been used, and where good results have been obtained. Even if it is an attack of peritonitis, which is not serious in its early hours, I have always felt it imperative to provide drainage.

The question of whether anything else should have been done at the time of operation, that is, the addition of gastro-enterostomy, is hardly worth considering. We see patients with closed perforations who subsequently develop symptoms, not necessarily of ulcer, but because the stomach is not functioning quite properly. Their first question is, "Wouldn't I have been all right if I had had a gastro-enterostomy at the time?" One may very well follow the plan of telling the patient in such a case that the surgeon saved his life. We do not know how valuable he considers his life, but it looks to us as if the operation had been a reasonable and a life-saving procedure. Why not restrict it to that and not argue about what should be done to keep the patient in good health, or to prevent recurrence.

As to whether a gastro-enterostomy should be

performed, I think the first thing to consider might be what Moynihan said in writing about operations on patients with peptic ulcers, or any kind of operation: "This patient must not die." I think that is the type of surgeon one would want to have in charge of such an emergency.

There are several things about the management of perforation itself that are interesting. As you know, there are certain continental surgeons who are very enthusiastic about radical operation for uncomplicated ulcer. They have applied the same treatment to perforations. They report some excellent results, and the procedure is at least worthy of thought, although not necessarily of adoption.

There is one principle which I think should always be kept in mind, and that is: when the perforation is situated favorably (on the anterior wall and fairly free), occasionally a nice excision can be made. The whole block of inflammatory area may be removed, the duodenum will open up, and the perforation will have been taken care of, and the patient at the same time given some protection against subsequent trouble.

There are two principles to consider in dealing with duodenal ulcers: first to relieve the patient of the symptoms he has had and second, to protect him against similar symptoms in the future. I believe that the particular operation (excision) is limited. I only mention it because occasionally it is a safe procedure.

In this particular case it is only a few days since operation. What are the prospects that this patient will remain well? A large part depends upon the care which he gives himself. After all that trouble he cannot have a normal duodenum. Such patients must recognize the fact that they are rather handicapped, and that they have to take a little extra care in their habits of living. This is a very important part in the whole question of treatment of duodenal ulcer. It might well be compared with any chronic disease. Take pulmonary tuberculosis, for example. You do not dismiss a patient with pulmonary tuberculosis and say, "Go ahead and act the same as anybody else." You cannot do it. Such patients must watch their periods of rest and avoid undue fatigue. So it is with duodenal ulcer. The sooner these patients realize that they must watch for early symptoms, the more likely they are to get permanent results. I think the reason many of these patients have recurrence of symptoms, not necessarily severe, is that they do not recognize this very important fact. After they find they are perfectly well and can eat anything, they begin to step up a little, and perhaps they get back to some of their old habits.

You will all agree with me that this patient was handled in a way which shows that the art of mod-

ern surgery is really amounting to something. That is, the diagnosis was not attempted. There was no administration of methylene-blue to try to see what happened in the abdomen, but a quick decision was made and immediate operation advised.

Case 3: The next patient is one in which you will all be particularly interested. I reserved it for the last because it illustrates one of the great problems in the treatment of duodenal ulcer. Every surgeon who is interested in improving his results will prefer to show a patient like this one rather than to show a patient with particularly good results. It is in this type of case that we really make some progress.

Dr. Synhorst: Here is a man twenty-seven years of age, single, a barber by occupation, with a negative family history and negative past history, except that he was diagnosed as diabetic five years ago and has been under medical management. He complains of stomach trouble and diabetes and states that he has had trouble more or less constantly for two years, with epigastric distress two hours following meals, relieved somewhat by food and soda. He has been nauseated soon after eating, but never vomits. He has some intolerance to acid foods, belches quite a bit, is nervous, restless, sleeps poorly (not because of pain but because of nervousness and restlessness), feels exhausted and weak, is very constipated, uses laxatives, and complains of dizziness. His weight has dropped from 190 to 147 pounds.

I might say that an x-ray report in July was definite of duodenal deformity. Total acids were 70; free hydrochloric acids, 46; systolic blood pressure, 130/85; pulse, 72.

In July, 1929, a gastro-enterostomy was performed for very definite duodenal ulcer. At the same time his appendix was removed. He felt somewhat improved for about a month, but still complained of some pain, more particularly across the lower abdomen. In all this time he was very constipated. Then we did not see him for about two more months.

In November, 1929, he came in reporting a weight loss. He was anemic and apparently had been hemorrhaging; the stools were positive for blood. At that time his red cell count was down to 2,100,000. He was placed in the hospital, put on Sippy management, and he has been showing steady improvement since then. At the present time his blood count is up to 4,500,000. His weight is back to 146.

Dr. Balfour: In spite of the fact this man should be in the most serious condition, he is healthy looking, and yet he has jejunal ulcer. If we go back over the facts of the case we will get some clew to the type of case in which jejunal ulcer is likely to occur. In the first place, this man is young. In the next place he had no obstruction; he had high acids, and apparently has an unusually unstable nervous system. He is the type of patient who is so interesting to the gastro-

enterologist, particularly the one who is interested in the etiology of peptic ulcer.

All who have given any thought to the etiology of ulcer have been convinced that there is a marked neurogenic factor, and they all try to figure out the mechanism of this particular factor. Recently Dr. Cushing has made a most intriguing suggestion, that the factor lies in the midbrain; that there is some relation between the median lobe and peptic ulcer. Certainly everyone will agree with the fact that many of the patients who are suffering, and suffering a good deal, from peptic ulcer, are of the hypersensitive type; that is, everything they do is done immoderately, and they just do not know how to rest or how to do things in moderation. I think this young man, from what I can learn, is of this type.

This presents a difficult problem from the standpoint of what you are going to do with the patient. Such patients are difficult to cure by medical means, and they are equally difficult to cure by surgical means, particularly before obstruction occurs. Patients who present themselves for operation I think often have hypersensitivity. They are hypersensitive to pain, and they will urge an operation much earlier than the patient of the hyposensitive type. So it is a temptation to offer them surgical measures rather early. As I say, it is a difficult problem to know what to do with this type of individual. It does not seem right that such patients should continue to suffer, and that their normal occupations should be interfered with by this recurring indigestion. When it cannot be controlled by medical means, one is tempted to try surgical measures.

Fortunately, the majority of these patients will get well after gastro-enterostomy. I would expect this to be the end result here. It is important to keep in mind, in estimating the relative merits of radical and conservative procedures, that gastro-enterostomy is a form of treatment, not necessarily a radical cure of the lesion, in that gastro-enterostomy does not touch the lesion. This may be only a temporary procedure.

This treatment with this boy, for example, can be discontinued any time. A second operation can be performed and the gastro-enterostomy taken down, assuming that the primary lesion has healed. There will be no question about that, or very little question, because healing of the lesion is the first result of gastro-enterostomy. This duodenal ulcer will probably heal.

In some of these cases the lesion healed where it was bleeding and probably small. If it is true that lesions will heal in other parts of the stomach by medical treatment there is a possibility that in

this case there will be complete healing. At least this treatment should be given a thorough trial in a patient of his age and type.

Suppose the lesion does not heal; suppose that after the patient begins gradually to get back to his normal habits of living, he begins to have pain and bleeds again? Then the time is ripe to do something with the jejunal ulcer.

This brings up the problem of the care of jejunal ulcer. I speak of this because I think it is a very important feature of this whole problem. As you know, there are advocates of more radical operations, who base the whole principle of the operation upon the fact that jejunal ulcer may follow gastro-enterostomy. They do not speak about the good results, but say, "we don't do gastro-enterostomy because we get jejunal ulcer after it." This is not much of an argument for any other procedure, particularly radical operation, as a primary procedure for duodenal ulcer. In the first place, to subject a non-malignant lesion to an operation of high risk is a questionable procedure. It would mean a high risk if done as a routine.

If this boy has further trouble, the treatment of the jejunal ulcer, if it is undertaken early, will constitute but little risk. There are many things which can be done, besides taking down the gastro-enterostomy, to help the boy get well. It should be remembered that the disease is chronic. If a patient asks, "If I am operated upon, what chance is there of getting another ulcer?" I say, "You are still going to have your stomach and duodenum. It is just as possible for you to get an ulcer as it is for me." The thing about gastro-enterostomy is that it does protect a high percentage of persons against recurrence of a disease, the cause of which is not known. To go in blindly, therefore, and cure the patient of his symptoms and prevent him from getting a recurrence of the disease, is really a great accomplishment. It is done in the large majority of cases. This case of jejunal ulcer is presented to show that we must recognize the fact that there may be disappointing results after gastro-enterostomy for duodenal ulcer. If this boy has further trouble he may bleed and have pain, and the pain, by the way, may be referred to a different part of the abdomen. In such cases, if you ask the location of the pain, the patient will usually place both hands on the lower part of the abdomen. You may be fairly certain then that you are dealing with an ulcer in the jejunum. Do not let it go until some of the serious complications of jejunal ulcer occur.

Most serious of all, of course, is colic fistula. That only comes from delay. One rarely sees a colic fistula in an early jejunal ulcer. If you go back over the history of a case of colic fistula you will find the patient had pain a long time with

increasing severity, and finally came the blow-out. It carries considerable risk.

The treatment for this boy, in case there is recurrence of the lesion, is first to take down the gastro-enterostomy. There is no use delaying, and no use dissecting the ulcer. One just assumes that the gastro-enterostomy has failed. The thing to do with a failure is to wipe it out completely, so take the gastro-enterostomy down; that is, mobilize it, undo it and dissect the jejunal ulcer, wherever it may be. I have not used the word gastro-jejunal ulcer, because it is extremely rare. These ulcers are in the intestinal tract, not in the stomach, and seldom involve the anastomosis. The ulcer may be large enough so that a block of jejunum may be taken out and the opening in the stomach then closed. In that case one is faced with the problem of how to deal with the primary lesion. That is one of the most interesting points in the treatment of these ulcers, because, in the first place, one is dealing with a patient who has a high liability of recurrence to ulcerations. The only explanation to give to the patient is that there will be five jejunal ulcers in one hundred patients of this type; that is, young, high-strung persons with high gastric acidity. Why should he be one of those five out of the one hundred? That makes the problem interesting. Knowing that he has an extra liability to ulcer, I think the ideal procedure, when it can be done, is first to mobilize the duodenum. This should be done as the first stage in the operation. When you are operating on jejunal ulcer, do not go in and make a careful investigation of the gastro-enterostomy. See what the primary lesion was.

In some cases you find no evidence of the primary ulcer in the duodenum. There your problem is simple. If nothing can be shown in the duodenum, all you have to do is take off the gastro-enterostomy. Then you are dealing with a case in which the original symptoms were due to something other than inflammatory process in the duodenum. This is a satisfactory way to have the case turn out, because you know that as far as the stomach and duodenum are concerned, everything is clear. As a rule, however, you will find the evidence of a scar in the duodenum. If it is mobilized properly you will find that this scar can be dissected in such a way that you can get a large outlet. The inflammatory process is gone. You change the function of the stomach. You probably prevent the hyperperistalsis and the spasm that come with peptic ulcer which are symptoms of ulcer. The ulcer itself does not produce symptoms. It is the reflex disturbance from the ulcer that is really responsible for the symptoms.

It is a very nice procedure to dissect this lesion and reconstruct the pyloric outlet.

In some cases it is better to resect the stomach; that is, carry out the principle which is advocated by those who believe in partial gastrectomy, the removal of a large part of the stomach, not the acid-bearing part of the stomach, but the part that stimulates the secretion. The acids are secreted from the angle of the esophagus in the fundus of the stomach. When you hear of the so-called acid-bearing part of the stomach being removed, that is, the antrum and the pylorus, it is really the stimulating part. In some cases it is advisable to dissect the jejunal ulcer and reestablish gastro-intestinal continuity by union between the fundus and the jejunum. The difficulty in this is that you must keep in mind all the time that you are dealing with a patient who has a high liability to ulcer. What if he gets an ulcer in this resected stomach? If is an awkward thing to handle. Patients are disabled worse than they ever were before, and sometimes the disability is complete, because, in the first place, it is difficult to cure an ulcer in a resected stomach.

If it is true that ulcer is likely to occur when all of the stomach but the duodenum is removed, or when the continuity between stomach and duodenum is broken, the plan of bringing the stomach down and hooking it onto the duodenum again may be carried out. This is perfectly possible. I have done it in two or three cases in the last six months and have been pleased with the immediate results, and the ultimate results should be good because of the hook-up with the duodenal secretions. The alkali and acid mechanism is balanced so it should be better than having everything dumped from the stomach into the jejunum. Sometimes that can be done by closing part of the stomach and bringing the remainder around to the duodenum and hooking it up again.

This business of jejunal ulcers is complicated, but it is not as bad as it appears. In the first place, they occur rarely. In the second place, if a diagnosis is made early and the patient is treated properly, they are not difficult to handle. This is fundamental. Do not spend too long on medical treatment of the patient who comes in after he has had a gastro-enterostomy, and whom you suspect has jejunal ulcer. The ulcers are easy to repair when they are small and before they have a lot of induration around the jejunum and around the anastomosis. At least the gastro-enterostomy can be taken down and the patient put back where he was before.

Finally, those patients, as I said in the beginning, must realize that they are out of luck, so far as the type of disease which they have is con-

cerned, and they have to learn some kind of co-operation. I think that is one of the great problems in this whole question of peptic ulcer. There is such a temptation for the patient to go ahead and behave and eat as the rest of the family does. Such patients are handicapped, and they might as well make up their minds to it if they are to dodge serious trouble from ulcer. Take the friends you know who have duodenal ulcer. How do they manage? They manage by using some intelligence in their habits of living, and taking frequent vacations. They realize they must release themselves from stress if they are to get relief from their present symptoms, or to abort an attack.

I think that is very important to impress on the patient, particularly a patient of this type. If this man continues to behave himself I believe that he will have no further trouble.

SPINAL CORD INJURIES

WALTER D. ABBOTT, M.D., Des Moines

The appalling increase in accidents in recent years has brought forth a demand upon physicians and surgeons for a more adequate knowledge of traumatic surgery. The frequency of disabling injuries to the spinal cord is apace with our rapid transportation and increased speed in industry. To sufficiently meet this situation a careful study of the factors involved in traumatic cord lesions is required, and an attempt will be made to present the salient features in this type of case.

ANATOMY

The architecture of the vertebral column is such that the two weakest points are at the greatest curvature, namely the fifth cervical and first lumbar vertebrae. It is in these regions that most fractures occur, but no portion of the column is immune from fracture or dislocation.

Injuries sustained by falling on the head or in diving usually result in a fracture dislocation of the fifth and sixth cervical vertebrae or occasionally a fracture between the first and second cervical; this latter lesion is combined with fracture of the odontoid process and is nearly always fatal.

A cave-in of earth or coal on miners or a fall from a height with the patient landing in a sitting posture usually results in a fracture dislocation of the first lumbar vertebrae.

A crushing blow may cause the severance of the spinal cord, a hemisection or mere contusion. The attendant symptoms depend upon the involvement of the nerve tracts, which are illustrated in Figure 1. If the pyramidal tracts are damaged there

will be a paralysis on the same side as the decussation in the medulla. If the posterior columns are encroached upon, the loss of tactile, muscle and joint sensation likewise occurs on the homolateral side because this crossing is also present in the brain stem. However, when the spinothalamic tracts are injured, the pain and temperature sensations are lost on the opposite side, as these fibers cross over within one to four segments after entering the cord. Thus a lateral hemisection of the cord will result in a Brown-Sequard syndrome or homolateral motor, tactile, joint and muscle loss and absence of contralateral pain and temperature sensations. (Case 2.) Usually the vesical and rectal sphincters are paralyzed from a lesion at any level, but the duration of the loss depends upon the amount of actual destruction to the nerve fibers supplying these parts.

The vasomotor phenomenon accompanying a spinal cord lesion is not always constant and is usually a transitory manifestation of contusion of the cord. The presence or absence of reflexes is dependent upon the level of injury but often all reflexes are lost immediately after the injury, due to the spinal shock. After recovery from spinal shock the evidence of an upper motor neurone lesion is manifested by the destruction of nerve tissue and is in keeping with the level of motor and sensory loss.

DIAGNOSIS AND TREATMENT

Before illustrating typical cases of injury at various levels, a word on the general management of these cases may be of value.

The patient is usually admitted to the hospital soon after the accident and often is in a state of shock. If it is known that there is a severe spinal injury, the patient should be placed on an air mattress over a Bradford frame. Heat is applied to the body but here great caution is necessary because a severe burn may result if a hot water bottle is placed against a paralyzed or insensitive extremity and a trophic ulcer may eventually develop. It is better to place the hot water bottle outside a blanket so that there will be no immediate contact with the body. Little should be done in the manner of examination until the patient is out of shock and stimulants should be given as indicated. It is well to test the blood pressure, pulse, temperature and respiration every thirty minutes for the first two hours after admission and then hourly until the general condition is better. The temperature and respiration are of extreme value in determining the prognosis of an injury in the cervical region, for it is in this area that most fatalities occur. A marked rise in temperature and alteration of respiration is an ill omen.

The bladder and bowels demand extreme vigilance and every effort to prevent soiling should be exerted so that there will be less chance of developing the dreaded decubital ulcer. The paralyzed bowel is usually atonic and enemata are necessary to evacuate the intestines. Here again careful nursing will prevent soiling and the

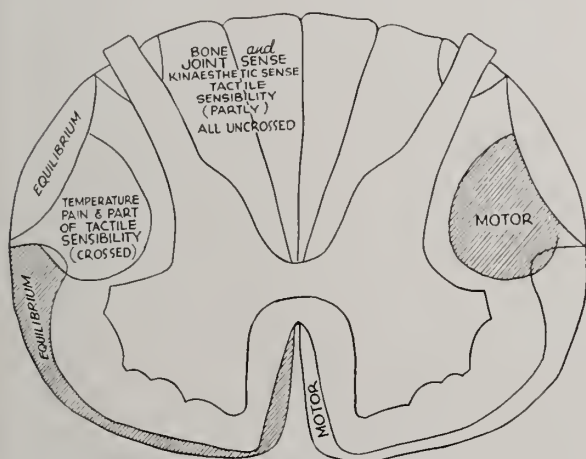


Fig. 1. Cross-section of spinal cord showing location of principal motor and sensory pathways.

development of bedsores. There is some difference of opinion as to the care of a paralyzed bladder following cord injury; some authors advocate suprapubic cystotomy, others a retention catheter, while others prefer to allow the bladder to overflow. Automatic bladder function usually develops two to three weeks after the injury unless there is a marked destruction of the nerve tissue supplying the vesical and rectal sphincters. However, cystitis and pyelonephritis may develop in the interim unless free drainage occurs. Even then in a large majority of cases bladder infection develops and it is often this complication that eventually takes the patient's life. With the first evidence of cystitis, urinary antiseptics should be given, depending upon the reaction of the urine.

While it is true that the sphincter loss may be only temporary, I feel that a retention catheter should be inserted and the bladder irrigated twice daily with boric acid and some germicidal solution such as mercurochrome or potassium permanganate. The catheter should be changed every four days and a daily examination of the urine is absolutely necessary. The chief argument for suprapubic cystotomy is the prevention of a traumatic urethritis, but this seems a drastic procedure when there is doubt as to the duration of sphincter loss.

After the immediate treatment for shock and care of the bladder, a careful physical, neurologic and x-ray examination will determine the level of

the lesion. It is essential that a spinal puncture be performed with the estimation of pressure, color of the fluid, presence of blood, existence of a subarachnoid block and number of cells.

Most cases of severe spinal cord injury occur at the time of the accident so there is no indication for any emergency surgery. It is true that hemorrhage within the spinal column, either intradural or extradural, may cause a compression myelitis, but this is not a common incident, and in any case it is much safer to wait until recovery from spinal shock. This phenomenon disappears in three days to six weeks and then the question of surgical intervention should be a matter of deliberation.

It is much easier to express opinions against laminectomy than to cite reasons for it; however, there are cases in which relief of pressure on the cord may result in a return of function and it is unfair to deny these unfortunate individuals every possible chance for partial or complete recovery.

Laminectomy and realignment of the vertebrae is indicated when there is evidence of indriven bone fragments, hemorrhage, subarachnoid block, partial dislocation without definite proof of a severed cord and compression of the caudal fibers. The benefit from operation depends upon the amount of damage to the cord and often it is one



Fig. 2. X-ray of cervical region showing fracture and dislocation of fourth cervical vertebra.

or two years before any return of function is manifested.

A discussion of the indicated treatment for spinal cord lesions at various levels can be illustrated by the following case records:

Case 1. On October 12, 1930, a man aged seventy-one years was riding in an automobile which overturned. He was paralyzed from the shoulder down and lost sensation from the clavicle down. The vesical and rectal sphincters were paralyzed. All reflexes were absent. X-ray showed a fracture dislocation of the fourth and fifth cervical vertebrae. (Figure 2.) The patient's past history was negative. A spinal puncture revealed clear fluid, pressure 18/12 cm. of water, prompt response and return on jugular pressure. The temperature was 103° and respirations were regular. Because of the absence of a subarachnoid block or evidence of blood in the spinal fluid it was decided that laminectomy was contra-indicated. A halter was placed around the patient's head and traction was applied in an effort to correct the deformity of the fractured and dislocated cervical vertebra. The patient was given general supportive measures but developed respiratory paralysis and died October 15, 1930. Autopsy was refused.

This case is quite typical of fractures in this region and usually the cord suffers from either transection or contusion, with secondary edema. The respirations usually fail and death is accompanied by hyperthermia. I have seen a number of patients recover after immobilization and the application of traction. Recovery is dependent, however, upon the actual amount of cord damage and laminectomy is seldom of value in this region, at least until spinal shock has subsided.

Case 2. On June 18, 1930, D. S., a railroad carpenter, aged sixty-one, fell from the roof of a freight car, landing on his shoulders. He was temporarily unconscious but on admission to the hospital was fully awake. He was unable to move his legs and had a weakness in the ulnar distribution of the right hand. Vesical and rectal sphincters were paralyzed. His sensory loss consisted of an absence of tactile, joint and vibration sensation from the first thoracic segment down on the right side, with a loss of pain and temperature sensation on the left side to the level of the third dorsal segment (Figure 3). Reflexes of the lower extremities and abdomen were absent.

Spinal puncture revealed clear fluid, pressure 20/6 cm. of water, prompt response and slow return on jugular pressure. X-rays of the vertebral column were negative.

Because of the slow return of the spinal fluid we concluded that there was edema of the spinal cord but there was no evidence of sufficient compression to warrant laminectomy. A week later motion returned in the left leg and a spinal puncture revealed a clear fluid, pressure 12/4 cm. of water and no evidence of a block when the jugular veins were compressed. The rectal and vesical sphincter control re-

turned in six weeks and in three months the patient was walking on crutches. At present there is a residual weakness in the right leg and the return of sensation is not complete.

This case is illustrative of a mere contusion of the cord in which there has been a fairly satisfactory recovery.

Case 3. J. B., a male, aged thirty-eight, was struck by falling slate when working in a mine on July 30, 1930. He was bending over at the time and the injury sustained was at the level of the third lumbar vertebra. There was an immediate paralysis of both lower limbs and loss of sphincter control. The reflexes were absent in the lower extremities and the sensory loss was from the fourth lumbar segment down. (Figure 4.) X-rays revealed a crushing fracture of the third lumbar vertebra with dislocation. (Figure 5 and Figure 6.) Because of the marked swelling over the lumbar area an attempt at spinal

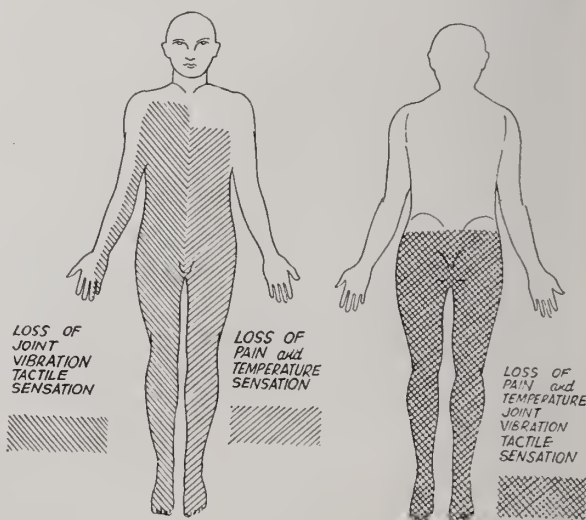


Fig. 3. Schematic representation of sensory loss, associated with paralysis of right leg, which is typical of a Brown-Sequard syndrome.

Fig. 4. Schematic representation of sensory loss, from injury to the third lumbar vertebra, associated with paraplegia.

puncture met with failure. In ten days it was decided that a laminectomy was indicated, and a crushing of the caudal fibers was discovered, blood clots were washed out with saline and an attempt to realign the damaged vertebrae was made. Traction was applied and the spine was immobilized. A retention catheter was inserted, and in two months the bowel and bladder function returned. Motion gradually returned, and now the patient is able to stand by holding to a chair with one hand. Examination of the urine shows only an occasional pus cell.

Although there was no confirmatory subarachnoid block, this patient gave every indication of compression of the caudal fibers, and laminectomy was the procedure of choice to relieve pressure on the nerve fibers.

Case 4. A. B., a male, aged twenty-five, was struck in the lumbar region by falling timber when



Fig. 5. Anterior view of x-ray showing crushing of third lumbar vertebra.

working in a coal mine, January 3, 1931. He was knocked down by the blow but was not rendered unconscious until his companions lifted him into a car, at which time his head hit a live trolley wire. He remembered nothing until awakening at home thirty minutes later. The companions who lifted him were not injured by the charge of electricity, nor did he show any evidence of an electric burn on his body except for a tender spot on the vertex of the skull. He was aware of a numbness of both legs to the hips and was unable to move either leg. Unless he would grasp his penis tightly he would not be able to hold urine but was aware of a sensation of a full bladder and desire to void.

When brought to the hospital a week later and placed on the x-ray table he felt something snap in his back and immediately noted a return of sensation and motor power. He also regained sphincter control. Although his legs were very weak, the patient could walk.

Examination was essentially negative except for tenderness in the lumbar region. X-rays of the spine were negative and spinal puncture revealed clear fluid, pressure 8/6 cm. of water, prompt response and return on jugular pressure and negative laboratory examinations. I made the following note on his chart: "No doubt this patient received a contusion of the lumbar region but there is no evidence of cord damage. I doubt if he received much of an electric shock as he shows no external evidence and his story

of paralysis, sphincter and sensory loss is not compatible with anatomic or physiologic limitations. His recovery is too sudden and dramatic to be anything but an hysterical paraplegia."

The above case is illustrative of the difficulties encountered when the compensation element is to be dealt with, and only a careful examination by a competent and trained observer will determine the actual degree of injury.

SUMMARY

Thorough examination and logical and conservative treatment of spinal cord injuries will be rewarded by a better prognosis in the future. It cannot be emphasized too strongly that laminectomy is a valuable adjunct to our armamentarium but it is only of value in carefully selected cases and should not be abused. This type of case, as in all traumatic lesions of the nervous system, will best be handled by a close cooperation between physician, neurologist and surgeon.

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THE SILENT SICKNESS OF MIDDLE AGE*

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When addressing a body of women, we realize we are before an audience that has much to do in the matter of future destinies. We believe there is a great truth and a saving grace in the axiom: "The hand that rocks the cradle rules the world." We do not believe you are here out of curiosity or for no purpose, but that you expect those of us who come before you to give you some conclusions of value relative to questions of moment.

We are going to consider a subject about which much has been said and written, namely, "The Silent Sickness of Middle Age." We will consider it in its economic, social and vital relations.

During the past four centuries about thirty-seven years have been added to the lifetime of man. Thirteen of these life years have been added since 1897, of which *seven* have been gained since 1910. These figures destroy the tradition that the life cycle of man is fixed and they afford encouragement to those who are interested in prolonging the health span and work span of life. No subject so deeply interests man as that of the duration of human life. He has indulged in both natural and supernatural schemes to prolong it. He has developed the sciences for the purpose of learning the underlying principles of vital processes so that it might ultimately be possible to stretch the time of each individual on earth to the greatest attainable length.

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Life is not a concrete substance that lies within the scope of our analysis. All animate matter is invested with or is the host of that something called life. Far back in geologic time we find our earliest fossil traces of man having lived before the Great Ice Age, about 500,000 years ago. Ultimately, within an undefined cycle or by accidental interruption, those phenomena we call life, cease, and we have that state called death. Scientifically, death is merely a word that is descriptive of a state of matter. It is represented by a host in a state of inertia. Life, then, is a physico-chemical process that resists inertia. Death is a natural or accidental interruption of that physico-chemical process. The source of life, the forces of life are beyond the pale of human comprehension, and for them we thankfully and with reverence acknowledge our gratitude to a Supreme Being. We are the custodians of that cherished gift, and to be indifferent in its perpetuation or conservation would be little less than profane.

Economically life is considered with regard to its value to our social and industrial world in dollars and cents. The economist places the increased world value of each baby born, at \$10,000. In 1925 there were 1,930,614 babies born, but during their first year of life 136,730 of them died. The economic aspect of this fact was so stressed that it brought forth regulations and scientific practices relative to the new-born, with the result that the following year the death rate dropped from 99 deaths per thousand live births to 64—an actual saving of 4,490 babies; an economic gain of \$44,900,000.

Another economic citation has to do with tuberculosis. A man who develops tuberculosis at twenty-five years of age constitutes a direct economic loss of \$32,000. Had the death rate from tuberculosis remained the same as it was in 1900, there would be 58,000 deaths annually in excess of the actual statistical deaths recorded. This represents an economic loss of \$1,200,000. According to an eminent statistician, the lowering of the mortality rate from tuberculosis has resulted in an annual capital saving of as much as \$2,000,000, based upon the mortality rate of 1900.

The scientific effort to maintain life's well being is represented by approximately 150,000 physicians, 50,000 dentists, 140,000 nurses and hospitals containing 860,000 beds.

Someone has said that the practice of medicine today may be regarded as a vital public utility, well regulated by law, well managed by physicians, hospitals and social agencies; that one out of every four families in the country will have at least one serious illness in the course of a year;

and that at all times 2 per cent of the population is too ill to work.

The achievements we have barely touched upon constitute a part of the past history that records the lengthening of the life span thirty-seven years. Our purposes for the future have been declared in the goal of the Gorgas memorial, which are: to save 750,000 lives, annually lost because of preventable disease; to save 300,000,000 work days lost annually due to illness; to build up twenty-five million youths and adults now physically below par, and increase the span of life from 58 years to 65 or 70, by educating the public to annual health examinations. This is the challenge thrown down to the medical profession and the objectives defined, together with class and mass responsibility for its performance.

No doubt there arises in your mind the question: how will the annual health examination contribute to this goal? The answer is that the health examination places the resources of science in a position to wield their influence in control of "The Silent Sickness of Middle Life."

Research and analysis reveal the fact that the chief life gains of the past, accredited to education and better social conditions, are reflected in the death rate reduction under middle age. The experience of recent years also bears out the statement that the expectation of life in the latter age periods is much the same as that of a century and a half ago. This is due to the death toll of degenerative diseases, namely, heart disease, tuberculosis, cancer, apoplexy, kidney disease, diabetes and cardiovascular changes.

The total number of deaths during 1925 were 1,219,019. The diseases above referred to contributed to this mortality as follows:

Heart and Circulation	217,567
Tuberculosis	89,268
Cancer	95,504
Apoplexy	86,319
Kidney Disease	102,212
Diabetes	17,385
Total	608,255

By way of illustration let us analyze how and why these diseases fall in the classification of the "Silent Sickness of Middle Life."

In a city of 7,200 people, sickness and mortality records were carefully kept over a period of twenty-eight months. These records show that acute respiratory disease accounted for 59.7 per cent of the total sickness, but that these diseases were responsible for only 19.6 of the total death rate. On the other hand, while the sickness rate from diseases of the kidneys, heart and blood vessels was only 3.2 per cent, yet these diseases

constituted or contributed to more than 34.7 per cent of that city's total death rate. Another interesting fact brought out in this study is that between the ages of forty-five and sixty-four the number of illnesses per death was only 50; between the ages of fifteen and twenty-five the number of illnesses per death was 200. When we observe that the chronic maladies contribute about 35 per cent of our mortality, but approximately only 3 per cent of our acknowledged or known sickness, it is evident that there is a great statistical gap here that constitutes "Silent Sickness", that is, sickness that does not speak in terms of disability. If the heart or kidneys or arteries are slowly changing in a way that will ultimately cause an organic breakdown, it is not an exaggeration to claim that the condition is essentially one of illness and requires attention in order to postpone or avert disaster. Here are 35 per cent of our deaths receiving but 3 per cent of our professional attention—Why? Because in their onset they are silent: for weeks and months and years, they do not speak in terms of disability; and when eventually disability does speak, degenerative changes have occurred that place the victim outside the pale of any restorative service. So we have come to refer to this circumstance as "The Silent Sickness of Middle Age." In order that the forces of scientific endeavor might be brought to bear on the curtailment of these middle-age maladies, we urge the physical examination.

What further can we hope to accomplish through the mechanism of the physical examination? We have observed that cancer is one of the greatest menaces to human life. For instance, in the death registration area in 1926, cancer and other malignant tumors were responsible for 99,833 deaths. That is not all we have observed. Note the following: the total number of deaths in 1921 from cancer was 76,274; in 1922—80,938; in 1923—86,754; in 1924—91,138; in 1925—95,504; in 1926—99,833; an increase in six years 26,354 deaths was attributable to these causes. further do we observe? It is this: 14.4 per cent of all cancers causing death during the year 1926 were of the female organs; or 14,375 women died of cancer of the female organs during that year. Further: 9.2 per cent of cancer mortality during that year was due to cancer of the breast; or 9,184 women died of cancer of the breast in 1926; and further, 2.8 per cent were from skin cancer; or 2,795 deaths were from that cause. A total of 26,354 deaths was attributable to these causes. The locations of these cancers were such that with the exercise of proper diligence they might have been detected in time to circumvent a vast number of these deaths.

While we are on the subject of cancer, it will be well for us to arrive at the modern conception of cancer. First, we seem to have determined that it is not of bacterial origin; that is, it is not due to any specific causative organism, as are scarlet fever, measles, smallpox or diphtheria. If this be true, we cannot develop any treatment for it in the nature of serums or vaccines.

In order that we may comprehend the cause and nature of cancer in the light of our present-day conclusions it is necessary for us to enter into a brief review of some of the normal physiologic processes of our body. First, it is incumbent upon our body laboratory forces to provide us with repair cells with which to repair broken-down or destroyed tissue cells. Every cut, bruise, burn, break, laceration or fissure that occurs on our body has to be repaired and cells have to be manufactured for that purpose. Unfortunately it seems that nature does not always produce a perfect repair cell. It does its best, but a repair cell must necessarily possess characters and factors that an original body cell did not possess and nature does not produce an exact counterpart of the original cell. This cell or these cells go into the repair area and heal the injured part. They maintain the repair that they have established for a period of time—five, ten or twenty years, as the case may be—but eventually they lose their power of maintaining the repair and separate themselves from the tissues surrounding them. These cells originated from a source endowed with the property of reproducing their kind; were that not true they never would have come into existence. Most unfortunately they retain this property to reproduce their kind and they multiply in numbers; so there soon appears a mass of them. They are very avaricious and greedy, and they rob the cells surrounding them of the nutrient material that should go to the normal neighboring cells and in consequence these starved cells lose their resistance and eventually become necrotic. Until the sciences give us a better understanding of the cause and characteristics of cancer this constitutes a word-picture of what we understand it to be.

We are recommending the physical examination for reasons already stated and we would make it clear to you what part the physical examination would play in the curtailment of cancer mortality. In order to do so we will present the arrangement of anatomic structures in the tissues of our bodies.

Leading to every area of the body are blood vessels that carry nutrient and repair material for the tissues. If it were not for this function we would live but a very short time. Leading away from every area of the body, there is a system of tubes and canals that carry the debris of repair

processes back into the interior of the body for their normal physiologic disposition. These tubes and canals are called the lymphatic system. Visualize a cell or cells possessing a cancer origin, beginning their process of multiplication, in any area of the body you may choose. We have told you these cells possess or retain the property of reproducing their kind and are avaricious. At some time, often very early in its activity, one of these cells will find its way into one of the canals of the lymphatic system, in which are fluids, moving back into the interior of the body. They float along in this fluid until they encounter a miniature filtering plant, known as a lymphatic gland. These glands are placed at intervals throughout the system and their function is to filter out any poisonous or dangerous particles that might get into the system. When the cancer cell which has broken away from the parent mass and gained entrance into the lymphatic canal, encounters one of these filtering plants, it is halted in its progress. However, it has all the characteristics of its parent cells and due to its power of multiplication and its habit of pilfering nutrition from the normal cells of the gland, the gland eventually breaks down and some of the cells of this second mass are liberated into the lymphatic channels again and they pass on until they meet with the resistance of another gland and in the same way destroy it. This process repeats itself over and over until cancer cells eventually find their way into the deeper and inaccessible body structures and are beyond the reach of any human agency. With this understanding of the nature and characteristics of cancer, I am sure no one could minimize the importance of the early discovery of the primary malignant mass of cells. If the mass is not discovered before some of its cells have penetrated through the lymphatics to inaccessible regions, the destiny of the patient is a cancer mortality.

The committee to make a study of heart disease, in the state of New York, reported at Albany, May 21, 1928. This is the most complete survey of this disease yet made, but deals only with the state of New York. However, the American Heart Association presented the national survey in May, 1927. This report shows among other facts that the death rate from heart disease increased in the twenty-five years preceding 1925, from 132 per 100,000 deaths in 1900 to 186 in 1925. This indicates an increase of 54 per 100,000 or approximately 40 per cent. Also in 1924 there occurred 176,691 deaths from heart disease, only 20,433 of these patients being younger than forty years of age; 156,238 were forty years of age and older. Here again we have an example of the fortieth year of life marking the time at which

a major disease manifests its destructive influences and like the other degenerative diseases does not announce its presence in terms of disability until the "Silent Sickness" era of middle life.

Going back to the declarations of purpose of the Gorgas memorial, namely; to save 750,000 deaths annually from preventable sickness; to save 300,000,000 working days lost annually due to illness; to build up twenty-five million youths and adults now physically below par; to increase the span of life from 58 years to 65 or 70 years; these proposals constitute a challenge to us as individuals. Are we going to accept it and subscribe to the policy of regular physical examinations—or are we going to go on allowing the Grim Reaper to slip by our outposts and sentries and strike us down ere we are aware.

X-RAY THERAPY AND ITS USE IN CARCINOMA OF THE CERVIX*

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In the fall of 1895, Wilhelm Konrad von Roentgen announced the discovery of the rays which bear his name, commonly known as x-rays. Their biologic effects were soon known when not properly used. In 1896 T. A. Edison and W. J. Morton reported cases which had suffered from conjunctivitis after some hours of exposure to irradiations. Skin lesions were also noted in that same year, following repeated exposure to the new rays. By February, 1897, Gilchrist had collected twenty-three cases of x-ray dermatitis, and in 1914, Feygin had tabulated 104 cases of malignant disease caused by irradiation. Fortunately we have all profited by such reports, and under proper supervision and protection, x-rays are of great value in therapy.²

While x-rays had been used in the treatment of malignant disease since 1914, it was not until about 1919, when Wintz, of Erlangen, Germany, announced a scientific and accurate method of deep x-ray therapy, that the present methods of x-ray therapy could be said to have begun.

THEORIES

Many theories³ have been propounded to explain the action of the rays, and as in other fields, proof has not been easy to obtain. Perhaps the best known theory and the most appealing to our imagination, is that the rays have a selective action on malignant tissue. We know that the normal tissues do not all react the same; for example, the convoluted tubules of the kidney will undergo marked degeneration, when exposed, while cells of the conducting tubules are not affected by the

* Presented before the Johnson County Medical Society, May 6, 1931.

same dose of x-rays. Also, "Very rapidly growing cells are most affected by irradiation," a statement known as the law of Bergoni and Tubondeau, who experimented on the testes of mice. Thus the more rapid the growth of the malignant tissue, the better the response to x-rays.

Cells in an active state of division are more affected by a measured dose of radiations than similar cells in the resting stage. This can be shown by the ova of *Ascaris*, which are affected most when in a stage of division, as the metaphase. Some cells respond to a dose of radiation in different ways, according to whether such radiation is administered so that a large intensity is coupled with a short period of exposure or a small intensity is coupled with a long period of exposure. For example, the skin undergoes more destruction when it is exposed to a high intensity for a short time than a low intensity for a long time. Furthermore, cells of a tissue, in some cases, are more affected by a given amount of energy of one range of wave-length than they are by the same amount of energy of another range of wave-length. There are also differences existing in the latent periods of reaction when tissues are exposed to radiations; as for example, a few hours with the spleen to several hours with the skin.

A second theory propounded is that the rays not only act on the malignant cells, but cause such an effect on the surrounding medium that the tumor cells are overwhelmed. Canti⁴, of London, has done a great deal of work on this point. For proof, he shows that if tumor tissue is cultured and then exposed to x-rays, the tissue dies. However, if the same tissue exposed to the same amount of ray is transferred to a new medium, the cells begin to grow.

Ewing⁶, of New York City, believes the action of the rays to be primarily on the circulation by causing an endarteritis of the capillaries of the new growth, as the capillaries of the normal growth are able to withstand the rays.

Dr. Friedrich Dessauer⁵, of Germany, suggests that x-rays act by producing heat at discrete small points within the tissue.

CHANGES IN CELLS

In contrast to our lack of absolute proof of the suggested theories, we do know the changes¹ which occur in cells exposed to x-rays. Canti, who has done so much work along these lines (you may remember his moving pictures), states: "The most important changes induced are: (1) cessation of mitosis, which is immediate; (2) the return of mitosis in large numbers and abnormal form in three or four days; (3) the disappearance of

mitosis for the second time in eight or nine days; (4) the presence of cell debris which is removed by phagocytes; (5) the replacement of the new growth by fibrous tissue; and (6) mummification, which is of rare occurrence and found in certain cases where the destroyed new growth is not absorbed." These views are also held by Dustin of England.

STIMULATIONS BY RADIATIONS

It might be well at this time to bring up the question of the stimulating effect of radiations.⁷ The statement has been made that large doses of x-ray kill, while small doses stimulate. Like a great many other statements regarding x-ray therapy, namely, that treatment of mixed tumors of the parotid causes them to spread or treatment of tuberculous adenitis causes miliary tuberculosis, it is easier to make the statement than it is to prove or disprove. As Rolleston says, "The evidence of what has been regarded as stimulation of cells is really due to the removal of inhibitory influences." Also, "The hyperemia due to the reaction caused, is responsible for a transient cellular activity, and any apparent stimulation due to irradiation is a temporary phase only and is invariably followed by more or less definite functional and organic deterioration." Rolleston¹ sums up his remarks: "At present the stimulating action of irradiations on existing malignant growths cannot be regarded as established."

PHYSICAL CHARACTERISTICS OF X-RAYS

The term x-rays is really a misnomer. There is as much known about them today as there is of other light waves. Pohle⁸ defines Roentgen rays, "They are a part of the electromagnetic spectrum which extends from the electric waves, hundreds of meters in length, down to the shortest gamma rays of radium." As with light, Roentgen rays can be reflected and refracted.

As the voltage of a tube is increased, shorter Roentgen rays are produced and the shorter the length the greater the penetration. The effort, then, has been to increase the voltage. Mechanical difficulties have been in the way. In France there is on the market a machine which will deliver 400,000 volts at two milliamperes, and at the Memorial Hospital of New York City is one which delivers 1,000,000 volts.

At present, we are using 190,000 volts and four milliamperes with an air-cooled tube.

Filters are used to remove the longer waves which would otherwise be absorbed by the skin. Thus by the proper filtration, the skin is protected. Copper is commonly used as it is readily obtained in the pure state. Tin and zinc are sometimes used. We use .56 millimeters of copper and 1.0

millimeter of aluminum, the latter metal being used to absorb the characteristic radiations which are given off by the copper.

Back-scatter must be considered. With large fields this may amount to as much as 50 per cent of the amount which strikes the skin. We use an anterior and posterior pelvic field, each 20 cm. by 24 cm., which is considered as a large field, and a perineal field 8 cm. by 10 cm.

TREATMENT OF CARCINOMA OF THE CERVIX

There are two main factors to be considered in therapy of carcinoma of the cervix; first, the local lesion, and second, the distant lesion. If one were ever sure that there were no metastases, the problem would be simpler. Werthheim, quoted by Stevens⁹, was surprised to find during his radical hysterectomies that in all of the cases which had appeared to be early ones, one-third already had metastases to the pelvic lymph nodes. Thus, therapy applied only to the local cervical lesion is not sufficient. An attempt must be made to reach the distant lesions, and this can be done only by external radiation.

Carl Krebs¹⁰, of Sweden, has proved on rats that irradiated normal tissue either does not permit transplanted malignant cells to grow or that they grow with difficulty. Thus external radiation, if applied even in an early lesion, would tend to prevent metastases, especially as Barnes and Donaldson¹⁴ state, "Recurrences after radium are seldom local."

Infection of the local cervical lesion plays an important part, and a large percentage of cases are infected. Healy¹¹, at the Memorial Hospital, New York City, estimates that 60 per cent of cases, "appear with a large, infected, ulcerated lesion in the cervix."

As Wintz¹² states, "Infected cancerous growths have worse chances than non-infected. The radiosensitiveness of a cancer cell is diminished, while that of the surrounding tissue is increased. . . . Thus the radiosensitiveness of healthy and diseased tissues becomes nearly the same." Attempts must then be made to combat the infection, and while this is being done, external radiation can be applied and the distant lesions treated.

The question arises as to the proper time for applying external radiation. Pack¹³, of Paris, believes that Roentgen therapy should precede radium therapy in carcinoma of the cervix as Roentgen therapy is more efficacious at that time. Also, Barnes and Donaldson¹⁴, of St. Bartholomew's hospital, London, state that "X-ray treatment would tend to shrink the growth and thus bring the growth completely within the range of the radium."

Thus external radiation applied first is of the

most value, because (1) the local infection can be treated at the same time; (2) the distant lesions can be treated or prevented; (3) the local growth can be made smaller, and often made to disappear. We have had one case, and Weatherwax, of Philadelphia, in a personal communication cited three cases, which received no internal radiation and complete healing of the local lesion took place. Barnes and Donaldson¹⁴, go on to state, "Considerable shrinking and even temporary complete disappearance of a carcinoma of the cervix can be brought about by x-ray."

One might well question the use of any internal radiation, and Wintz¹², of Germany, a leading radiotherapist of today, has used nothing but external radiation for twenty years. He reports a five-year cure of 60 per cent in the type of carcinoma of the cervix still restricted to the cervix, and 12 per cent in the cases with extension, or 36 per cent for all types. This is for 956 cases treated between 1915 and 1925 and refers to five year cures.

Stevens⁹, of New Jersey, who uses external radiation to precede the local application of radium, reports a five-year cure in 48 per cent of all cases. The number of cases is not given.

Strassman¹⁵, of Germany, gives radium first and four weeks later starts external radiation. In 732 cases treated between 1913 and 1928, 25 per cent were still well five years after therapy had been applied.

At the Mayo Clinic, as reported by Stacy and Bliss¹⁶, out of 981 cases, of which 898 were traced, 22 per cent of all patients were alive five years later. This report is for cases treated between 1915 and 1923. External radiation was applied after radium had been applied to the cervix.

From 1910 to 1915, 500 patients were treated at the Radiumhemmet of Sweden, and 22 per cent were well five years later. A recent report by Forsell¹⁷ shows an improvement, since the percentage has risen to 32 per cent, due to better technic. This improvement in technic has been the use of external radiation, following the second radium application and before the third application of radium internally. Forsell states, "No other conclusion can apparently be drawn from my investigation than that the combined treatment has brought with it a more favorable end-result than intragenital treatment by radium alone."

CONCLUSION

In conclusion I quote from Heyman¹⁸⁻¹⁹, of the Radiumhemmet: "Radiologic treatment excites, when carefully adjusted, a healing process characterized by destruction of the tumor cells and regeneration of the tissues which were the seat of

the malignant process. In the happiest events, nothing is found in the pelvis indicative either of the disease itself or of any changes due to the treatment. In most cases, however, a moderate atrophy of the uterus and vagina remain."

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PREOPERATIVE PREPARATION AND ITS RELATION TO POSTOPERATIVE COMPLICATIONS*

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No matter from what angle one may look upon the medical profession, its basic principle is getting people well. Honest effort has been bent for centuries toward this end. Each step forward has been the result of the summation of thousands of details, often unimportant in themselves, but when accumulated, of vast benefit to the human race. Forethought and after-care are often as important as surgical skill.

One may say without reservation, that the physicians' advice, and the preparation and treatment of patients are daily becoming more dependent on thorough knowledge of physiology and

chemistry. It is realized, too, that only on paper may patients be separated into groups according to their particular illnesses; age and bodily resistance are individual factors which can properly be rated only by experience and knowledge.

It is not of the acute case, in which immediate operation is imperative and in which risk must be assumed by patient and surgeon, that I wish to speak, but rather of the subacute, recurring, or chronic case in which statistics show too great mortality, too great morbidity.

There is not one of us who, as referring physician or surgeon, has not had the alarming and unfortunate experience of seeing death follow a comparatively mild surgical procedure, such as opening a boil, performing tonsillectomy, or removing a mildly affected appendix. Following such an experience the common feeling is that all surgery is major surgery, a feeling soon forgotten in the progress of normally good results.

Understanding, then, the futility of generalizing on groups of patients, since they are all individuals, I proceed to view the factors of importance which, based on the most common postoperative complications, should be considered from the prophylactic standpoint in preparing patients for operation.

Pneumonia today, as in the day of Osler, is "captain of the men of death". Surgically, broncho-pneumonia and hypostatic pneumonia are the types most seen and most feared. The common causes of broncho-pneumonia following operation are insufflation, multiple bacterial emboli, and infarcts. Knowing the causes, what can be done before operation to cut down this complication? Examination of the oral cavity to determine the presence or absence of pyorrhea and other infections; clinical and roentgenologic examination of the thorax; recording in the history any previous attack of pneumonia or the frequent incidence of colds; all are measures to be taken. Perhaps the greatest advance in the curtailment of pneumonia has been in making possible the wide choice of anesthetic agents that are now available. Spinal anesthesia, properly administered as to size of dose, site of administration, and rapidity of injection, allows the reflexes of the upper part of the respiratory tract to be maintained, a proper procedure for the patient who is potentially a subject for respiratory infections. The complete relaxation and the consequent ease, serve further to reduce risk from the standpoint of the time factor.

The tendency in anesthesia now seems to be to use combinations or balanced anesthesia, such as spinal anesthesia and nitrous oxide, nitrous oxide and ether, or ethylene. Sodium *iso*-amylethyl barbiturate (sodium amytal), and sodium ethyl (1-methylbutyl) barbiturate (nembutal) have

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passed through the same stages of progress that spinal anesthesia has passed through, and are now given in smaller doses with the idea of supplementing them with some other type of anesthetic. We do not make the patient suit the anesthesia, but rather, the type of anesthesia suit the patient: the latter is determined before operation, and depends on the complaints of the patient, on the operation, and on the choice of surgeon.

When anesthesia has been given by inhalation with one of the newer machines and the patient is ready to be returned to his room, the administration of carbon dioxide and oxygen are of distinct prophylactic value in reestablishing the normal function of the lungs as Haldane, Henderson and others have shown. Whatever may be said of the oxygen chamber or the oxygen tent, at the clinic we have found it of definite value in treating early, suspected, and frank cases of pneumonia. The earlier it is applied, the greater the benefit.

Hypostatic pneumonia is primarily of circulatory origin, and is most often seen as a terminal event, affecting those who are along in years and whose vessels and hearts are incapable of withstanding the added shock of operation. So far as possible, the decision for operation rests on the estimation of the patient's debility, the condition of his circulatory apparatus, and the amount of surgery necessary. Postoperatively, the important lines of treatment lie in frequent change of position, and the use of such drugs as digitalis, which increase the tonus of the cardiac muscle.

Phlebitis is another complication to which a tendency may be suspected before operation. It occurs chiefly among women of middle age or later life who are not at the time leading an active existence, whose blood pressure is comparatively low or varies considerably during the day, and who possibly have varicose veins or a tendency toward venous lagging, as demonstrated by swelling of the ankles and legs when they are on their feet very long. When possible, this type of patient should have a general toning up for a few days before operation. The circulation should be energized with such drugs as thyroid extract, 2 grains (0.12 gm.) three times a day, and a few nights of good rest should be insured by administering one of the barbiturates. If varicose veins are present their obliteration may well be the procedure of choice. If phlebitis develops postoperatively much time is lost through the prolonged necessary elevation of the part, constant application of heat and cold, and the surgeon loses much rest in the abiding fear of embolism further complicating, if not terminating, the situation.

The greatest number of emboli occurs between the eighth and fourteenth day after operation.

Although they are not always fatal, the death from this cause is sudden and particularly distressing in that the complication cannot be foreseen and may carry off a patient who is otherwise convalescing perfectly. Emboli may come in showers or there may be a single embolus. Walters has reported the advantage of routine administration of thyroid extract after operation. It is well to remember that straining while on the bedpan or otherwise is particularly to be avoided during the period of danger.

Barring technical faults, we are interested in postoperative hemorrhage in two main groups of cases. First, the jaundiced patient causes anxiety. The longer the jaundice has existed, the more we fear the possibility of hemorrhage. For this reason, it is well to have the bleeding and clotting time carefully estimated before operation. The risk of hemorrhage has been markedly diminished by the preoperative use of calcium chlorid given intravenously, 5 c. c. of a 10 per cent solution once a day for three days. Repeated transfusions of small amounts of blood also have proved of real value in this connection. The second type of patient whom we fear will bleed is the hemophiliac, and of course, a carefully taken history will put us on our guard. Our recourse in case of necessity is transfusion. An important point in connection with any case in which transfusion may be necessary is that the blood group of the patient be ascertained before operation.

Hiccough is a subject which has interested us a great deal. I do not know the frequency with which it occurs, but I do know that the treatment is in its infancy. It is a complication particularly distressing to the patient, which interferes with rest and with the healing of the wound. It is seen most frequently following prostatic and abdominal operations on men of middle and later life. Following its onset, one often can get a history of previous attacks of hiccough, although it is unusual to have questioned the patient preoperatively on the matter. The inadequacy of knowledge of any medical subject may generally be estimated fairly by the number of treatments offered, and for none has more been advocated than for hiccough. A high concentration of carbon dioxide and a low concentration of oxygen by inhalation have been used for temporary relief. Sodium *iso*-amylethyl barbiturate, sodium ethyl (1-methylbutyl) barbiturate, codein, atropin and high enemas followed by divided doses of surgical pituitrin have also occasionally proved of value in particular cases.

Rankin and Palmer have recently reviewed the cases of parotitis that have developed postoperatively at the clinic, with particular reference to treatment by radium. Although parotitis may de-

velop following any type of major operation, its increase has been especially noted with the growing number of colonic cases. Symptoms of intestinal obstruction seem to have a part in its etiology, in conjunction with infection of some type in and about the parotid duct. The authors named found that of fifty-eight patients not treated with radium, twenty-three died; that of twenty-four cases in which surgical drainage of the gland was required, fourteen were fatal. Since the advent of the application of radium over the affected part, parotitis, although still serious, is not as much feared as previously. The effect of the radium is best when applied early, within one to two hours after the onset, day or night, in the form of two to four 50 milligram tubes, for a dosage of 800 to 6,000 milligram hours, depending on the extent of the trouble. This dose is filtered through 2 mm. of lead, 1 mm. of brass, and 0.5 mm. of silver at a distance of 2.5 cm. As a prophylactic measure after operation a great many surgeons have their patients chew gum to stimulate salivary secretion.

A type of streptococcus is known to be the causative factor in erysipelas. As a complication this condition is serious, and, like parotitis, requires immediate attention. When one case occurs, a small epidemic may be looked for; therefore, isolation of these patients is necessary. One may find, on questioning these patients, particularly the one with the primary case of the group, that the present attack is not the first. The disease is most likely to appear following lower intestinal and pelvic operations. The onset of erysipelas is generally first noticed by the appearance of a reddened, butterfly-shaped area over the bridge of the nose, the wings growing rapidly out over the cheeks; or it may start directly about the wound. Roentgen rays, applied to the surface well beyond the definite margins of extending involvement, are of value. Erysipelas serum may be used with specific benefit in a certain group of cases, although not in all. Lines of treatment are bent toward localization and eradication of the disease as it effects individual patients, and toward guarding against the infection of others.

Much can be accomplished in healing and in infection of wounds. This can be done by careful questioning before operation as to whether or not the patient bruises easily, or whether scratches and wounds in the past have healed promptly. If the patient is cachectic, the concentration of hemoglobin, and the erythrocyte and leukocyte counts should be increased by transfusions, administration of tonics or foreign proteins, or by whatever methods are available before operation. Those who have observed the work of many surgeons know that there is no standard method of closure,

that there is no best method of preparation of the skin for operation, and that there is no best type of sutures to be used. Closures based on physiologic knowledge of healing of wounds, as outlined by Hartwell, are all good. Some wounds will require more postoperative attention than others to be sure, depending on their inherent ability to heal; they require stimulation, or drainage, or may do better if left alone.

Briefly, now, I would like to consider some of those complications which worry the surgeon only because of the discomfort they cause the patient. Those who have been operated upon will agree. I believe, that gas pains lead this group. A forewarning of this so-called minor complication may be found in the clinical and laboratory examinations. The victim is usually the well trained, active, hyperfunctionating type of person, with rather a high gastric acidity, who does not take to the bed easily. An added cause may be found in inadequate intestinal cleansing before operation, particularly if barium and similar substances have been used shortly before for roentgenologic diagnosis. The type of anesthesia must be thought of in this connection, for, with increasing use of spinal anesthesia, the complaints from gas have definitely diminished.

It is interesting to note that spinal anesthesia has entered the therapeutic field as a worthy means of counteracting certain types of paralytic ileus. Although the physiologic factors involved in its action are not at present fully understood, its effect is definite and frequently dramatic. The dose used for this purpose is generally about half the surgical dose, for instance, of procain, from 50 to 75 mg. may be used.

Persistent nausea and mild regurgitation occasionally follow operation, especially if there has been chronic obstruction of long standing, or if nausea and vomiting have been marked as a secondary feature of the causative agent. Thus, whether the nausea and vomiting have been mechanical or mental in cause, the habit has been formed and it is often difficult to break. These patients are ready to vomit at the drop of a hat, and too frequently the anesthesia or some drug given before operation receives the blame. If a mechanical cause can be ruled out, the treatment should assume a sedative nature.

Last, but not least, there are the mental complications, which range in degree from severe postoperative psychosis to general inertness or lack of desire to get well. As a means of conserving nervous energy, of setting at rest those forces which arouse fear, unrest and resistance, the barbiturates have carved for themselves a permanent niche among the drugs valuable for preoperative use.

Instability of the nervous system, knowledge of a hopeless condition, misinterpretation of the words or actions of a thoughtless, tactless interne or nurse are a few of the many causes for mental unrest. The condition, regardless of degree, requires attention, perhaps involving more mental skill on the part of the surgeon than the operation itself. If the relatives understand that a given case is hopeless, unless circumstances alter conditions, a white lie is in very truth a white lie for when hope is gone, all is gone.

I have attempted to review the more common types of postoperative complications, not with the intention of giving you anything new, but rather with the idea that together we may impress on our minds some of the details which after all separate the good from the poor surgeon. The good surgeon will know his patient in advance, know what danger is pending, recognize it early, and meet it promptly.

THE TREATMENT OF PNEUMONIA*

C. C. HALL, M.D., Maynard

The treatment of pneumonia resolves itself into twelve principal factors which may be classified as follows: (1) the general care of the patient; (2) the specific organism causing the disease and the use of its serum, if such has been developed and tried; (3) the cardiac burden; (4) the toxins of the disease, their dilution, elimination and alteration where possible (the pneumococcic serums are not antitoxic, but antibacterial, that is, due to agglutination, they cause inactivity of the organisms and their inhibition or death); (5) the altered chemical activity, an altered acid-base relation (sodium chlorid retention, with losses of potassium, phosphorus and sometimes of calcium and magnesium, as shown in urinary examinations, these being the base of the buffer salts); (6) disturbed metabolism—incomplete oxidation of proteins; the presence of albumoses, or proteoses, in the urine; frequently a positive Diazo-reaction, a test for abnormal protein disintegration products. (In excessive metabolism there is destruction of the body proteins beyond the normal repair. Creatinin and purin bases are found in the urine. Urea is found in increased quantity after the crisis. Perverted or abnormal metabolism is often found as an accompaniment in the presence of nephritis or diabetes); (7) toxin formation, which leads easily to an acidosis from incomplete fat oxidation (there is deficient nourishment and often starvation, the body living off its own tissues after the reserve is burned); (8) chemotherapy and physiotherapy, including all drugs used in the

disease, hydrotherapy, diathermy and radiant heat; (9) relief of nervous tension, phobias, cares and responsibilities of home or business, restlessness and delirium; (10) avoidance of sequelae and complications; (11) the treatment of diseases occurring with pneumonia, or present prior to the disease; and (12) prophylaxis and hygiene. Owing to the time limit of this paper, we shall discuss only two of these factors, the general care of the patient, and the cardiac burden.

THE GENERAL CARE OF THE PATIENT

The first and all-important consideration in the treatment of pneumonia is the patient. We are treating a patient and not a disease. The care of the patient will be discussed briefly from the viewpoint of moving the patient, place of care, fresh air, diet, fluid intake, and rest.

1. *Moving the Patient.* If a patient already afflicted with the disease process is found in a place unsuitable for his care such as a stable, or basement, he should be removed to a more suitable place. This should be done, if possible, upon the first visit. The patient should be lifted carefully and placed upon a stretcher. If the distance demands a conveyance, a warm ambulance is necessary. The bravado asserted by many patients who insist upon walking or riding in an automobile is absolutely contrary to good judgment in the treatment of a disease so treacherous and so often fatal.

2. *Place of Care.* The proper place for a pneumonia patient depends upon his means. Surely there is no finer place than an isolated room in a clean, warm, well lighted home. If you find him there, leave him there, as a hospital has no advantages over a home for the treatment of this disease. Every necessary thing can be brought to the pneumonia patient, such as nurses, diathermy, radiant heat and apparatus for intravenous therapy. In a home there is less noise and disturbance, fewer gaseous and ether odors, less pollen from flowers (often troublesome to patients sensitive to pollens), and less possibility of intercurrent infection. If the physician in charge secures a consultant, or if he cannot visit the patient in his home or in the hospital where he is confined, it is seldom that his services are so superior as to overcome the harm done in moving the patient several miles to an institution.

3. *Fresh Air.* There should be an abundance of fresh air, 50 to 58 degrees Fahrenheit, with no draught. At this temperature the air is pleasant to the patient and is not too cold for the nurse in attendance. Fresh, cool air is a tonic. It contains more oxygen and moisture, and less carbon dioxide, vapor and gas. Cool air causes a drop of one

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to two degrees in the patient's temperature, a decrease of ten to fifty pulse beats per minute, and a decrease of five to twenty-five respirations per minute. It increases the body tone, body aeration and the systolic blood pressure. Hoobler and Howland, on separate investigations, reported that the systolic pressure rose from five to fifteen mm. from fresh air alone and fell again in the presence of warm air. Irons, in *Oxford Medicine*, states that the dyspnea of pneumonia is much relieved by an abundance of fresh, cold air.

4. *Diet.* The sick or feverish patient has as a rule an aversion for fats and often for sweets. Acidosis, marasmus and anhydremia may be initiated by starvation and inadequate feeding. A man forty years of age, 5 feet 9 inches tall, weighing 160 pounds, requires 1700 calories at basal metabolism. There is a ten per cent increase needed if three meals are eaten; thirty per cent increase if the man is up and about, and fifty to one hundred per cent increase if at labor. A patient at rest, with a temperature of 103 degrees, will need a twenty-five per cent increase over the above norm or a total of 2125 calories. If he eats three meals a day he will need 2350 calories. MacLeod states that there is an increase in caloric requirement of seven per cent for each degree of temperature, Fahrenheit. Food is necessary for fuel and repair, yet the appetite of the pneumonia patient is poor and the digestive juices are low in quantity and poor in quality. He has a distaste for food. Anorexia and even nausea and vomiting may be present. Sweets in the beverages may cause tympanites. A rich, non-gaseous, easily digested diet is needed, yet despite the need for food the average pneumonia patient takes only 800 calories per twenty-four hours.

The average caloric demand in a well man weighing 160 pounds is 1870 calories, distributed as follows:

- Protein 60 Gm., 240 calories.
- Carbohydrate 90 Gm., 360 calories.
- Fat 140 Gm., 1270 calories.

A patient with a temperature of 103 degrees, however, will require an increase of twenty-five per cent, or a total demand of 2350 calories. The need for protein is increased from 60 to 90 or 100 Gm. The following diet is that used by the Department of Medicine at the University of Iowa in the treatment of cardiac patients:

BREAKFAST

- Milk— $\frac{1}{2}$ glass.
- Cream— $\frac{1}{3}$ glass.
- Cooked cereal— $\frac{2}{3}$ cup with 2 teaspoons glucose.
- Sugar—1 teaspoon.
- One soft egg.
- Toast.
- Butter.
- Jelly.
- Sieved fruit— $\frac{1}{2}$ cup with glucose 1 teaspoon.
- Kaffee hag— $\frac{1}{4}$ cup.

10 A. M. lunch—1 glass orangeade with 1 tablespoon glucose.

DINNER

- Milk— $\frac{1}{2}$ glass.
- Cream— $\frac{1}{3}$ glass.
- Cream soup— $\frac{2}{3}$ cup.
- Ice cream— $\frac{1}{2}$ cup or 1 dipper.
- Stick candy—1.
- 2 Crackers.
- Mashed potatoes— $\frac{1}{2}$ cup with butter.
- Sieved vegetables— $\frac{1}{2}$ cup with butter.
- Or sieved fruit— $\frac{1}{2}$ cup with glucose 1 tablespoon.
- Or plain pudding.
- Ice—1 glass.
- Or water— $\frac{1}{2}$ glass.

3 P. M. lunch—1 glass malted milk with egg.

SUPPER

- Milk— $\frac{1}{2}$ glass.
- Cream— $\frac{1}{3}$ glass.
- Cream soup— $\frac{2}{3}$ cup.
- Custard—1.
- Sieved fruit— $\frac{1}{2}$ cup with glucose 1 teaspoon.
- Toast.
- Butter.
- Jelly.
- Sieved vegetable— $\frac{1}{2}$ cup with butter.
- Or, small baked potato with butter.
- Ice—1 glass.
- Or, water— $\frac{1}{2}$ glass.

7 P. M. lunch— $\frac{3}{4}$ glass lemonade with 2 teaspoons glucose.

Note the custards, glucose, ice cream and sweetened drinks. The total value is 2076 calories, with 44 Gm. of protein, 207 Gm. of carbohydrate and 157 Gm. of fat. Every pneumonia case is potentially a cardiac case complicated by fever, but the patients with fever will not tolerate the sweets. They refuse foods which they once relished. The above cardiac diet, rich in food value, is generally refused. A sample fever diet is as follows:

Two quarts of milk, or the equivalent, containing		
Protein	70 Gm.,	280 calories
Carbohydrate	100 Gm.,	400 calories
Fat	80 Gm.,	720 calories
		<hr/>
		1400
Two soft-boiled eggs, containing		
Protein		48 calories
Fat		108 calories
		<hr/>
		156
Total		<hr/>
		1556 calories

This leaves a deficiency of about 800 calories to be supplied by carbohydrates. Fat, of course, is poorly tolerated, and sweets are not well taken and there is consequently a loss in weight. Vitamins as found in yeast should be supplied, and vitamins B 1 and B 2, as found in cereals made of the whole wheat.

5. *Fluid Intake.* Fluid is the medium of chemical activity. The body under normal conditions requires at least three pints. A patient with fever requires an increase of fifty to one hundred per cent. Acidosis likewise demands an increase in fluid and practically every pneumonia patient has at least a mild acidosis. In experiments in the treatment of acidosis developing from diabetes it has been shown that the acetone and diacetic acids

may be diluted and washed out by a normal kidney. Increased fluids are required to supply activity in diaphoresis, catharsis, diuresis, sodium chlorid dilution, and in the dilution of the toxins of the disease and of metabolism. Harm results in three ways from diuresis and catharsis with insufficient food intake; the food is not absorbed, as in enteritis, and larger amounts are required; the buffer salts are washed out or depleted and must be replaced; and vitamins B 1 and B 2 which are water-soluble, may be washed out. These vitamins are essential for intestinal activity. They are also tonic in action, increasing the appetite. Vitamins A and D, as found in cod-liver oil, and fats, on the other hand, are only fat-soluble and are not washed out. If vitamins A and D are increased the normal amount of vitamins B 1 and B 2 are insufficient. Hoobler, of Detroit, and Cowgill, of Yale, state that marasmus and anhydremia may be produced in infants and experimentally in animals by diuresis and insufficiency of vitamins B 1 and B 2. With sufficient fluid must be given food for fuel and repair, buffer salts and vitamins.

Certain people are benefited by hot drinks, and these may be classified as follows: the aged and arteriosclerotic groups; the hypertensive group, particularly if there is a failing myocardium; the cardiac patients; the hypotensive group; patients with acute or chronic digestive disturbances; and the nervous group. Hot drinks tend to prevent nausea and vomiting, gas distension and cramps. They often hasten the process of digestion in the burdened body by permitting early and easier absorption.

6. *Rest.* Complete relaxation is essential. The prone position is not necessarily one of rest, unless the patient is comfortable. Cardiac patients may have to sit up and deformed or injured patients may require special positions.

A patient's position should not be changed for examination. The findings should be charted on the first examination and following that, only the exposed parts examined. A good record will then show the progress of the disease and the results of therapy. A consultant should not have the patient sit up or in any way disturb him. The findings should not be discussed in the patient's hearing.

An essential factor in the comfort of the patient is the procuring of the best possible bed. There should be no rubber sheets on the bed unless urination is involuntary, and even then it is better to use absorbent pads. The sheets should be changed as often as necessary to keep the bed smooth and comfortable, but the patient must not be disturbed during this task. Rest is essential and drugs

should be used if necessary. Complete inactivity must be endured. The nurse should change the patient's position so as to avoid passive congestion of the lungs.

The final step in rest is efficient nursing. The nurse should nurse the patient, and not the patient nurse himself. Only an unwearied nurse should be on duty, and if necessary, two or more should be employed. The patient should never have to ring a bell or pound with a cane to attract attention. Better an attentive wife or mother than a trained nurse in the best hospital, if she is absent when wanted.

THE CARDIAC BURDEN IN PNEUMONIA

Regardless of the state of the heart's function prior to the onset of the disease process of pneumonia, the burden placed upon the heart is increased both by the toxemias of body metabolism and by the pulmonic burden. Respirations are more rapid, due to consolidation of the lungs and congestion. This limits the amount of normally functioning lung. Tumors, empyema and emphysema do the same. Toxemias from the disease produce more rapid lung and heart action.

Pneumonia is as a rule a self-limited disease. The sequelae are few. The burden to the body as a whole is small; the burden to the heart, however, is often heavy. Its ability to stand this strain depends upon its reserve, its response to treatment and its resistance to becoming toxic.

The cardiac danger signals may be listed as ten:

1. Doubling of the pulse rate. If a patient has a normal pulse rate of 60, 70, or even 90, and in the process of pneumonia the pulse rate doubles, his heart is in labor. Evidently a slow, methodically acting heart must exert as much labor to double the pulse rate as a rapidly acting heart. Anything above the doubling point shows cardiac strain.
2. A drop in temperature with the pulse remaining high or increasing.
3. Cyanosis, even if slight. If progressive, it is absolutely prognostic.
4. Irregularities of the pulse, in rate, force, or rhythm, even before the appearance of auricular fibrillation.
5. Engorgement of the veins of the neck.
6. Edema of any dependent portion of the body.
7. The sudden appearance of bloody, frothy sputum.
8. Rales in the dependent portion of an uninvolved lung.
9. Signs of hydrothorax. This is a transudation of serum due to an embarrassed circulation. It is the result of congestion. An exudate is the fluid thrown off by an inflamed surface. The two may be differentiated by Rivalta's test, in which a

drop of 50 per cent acetic acid solution gives a flocculus in an exudate and only a discoloration in a transudate.

10. A decreasing systolic pressure with a falling or normal diastole. If the diastole increases and there is a decline in systole, it is a bad omen.

Many of the older practitioners of medicine were never taught that the circulation of the blood consisted of two systems working independently, each failing alone or simultaneously with the other. We shall consider separately, right and left heart failure.

Right Heart Failure. The right heart receives the blood from the systemic circulation. Its walls are thin and its reserve low. The onset of right heart failure is usually gradual. It may fail alone or in conjunction with the left heart. The following are the symptoms and signs of right heart failure:

1. Dyspnea upon exertion. If the dyspnea is present while at rest, a left heart involvement must be suspected.

2. Pain and distress in the epigastrium from food, with nausea and vomiting.

3. Congested liver and spleen.

4. Oliguria

5. Edema of the dependent portions of the body.

6. Cyanosis, appearing early in the fingers and lips.

7. Engorgement of the veins of the neck.

8. An excess of sputum, sometimes reddish or brownish red.

Digitalis is a specific for this condition, with diuretics, saline purges, restriction of fluids and a dry diet. There is decompensation; it is an hydraulic failure. In the presence of marked infection with much toxicity, there may be little therapeutic value in digitalis.

Left Heart Failure. This may occur alone, in conjunction with right heart failure, or following it. Left heart failure creates an emergency. The reserve is large and failure occurs only after prolonged stress. It may be fatal within thirty minutes; it may last a day. As a rule, it is sudden. It occurs in arteriosclerotic, hypertensive and luetic hearts. In pneumonia it may occur early or in the middle stage of the disease. Its symptoms and signs are:

1. Dyspnea with or without exertion.

2. Cardiac asthma, which is a prolonged inspiration.

3. Acute pulmonary edema.

4. Cheyne-Stokes' respiration, due to a depression of the respiratory center in the medulla, requiring more carbon dioxide for stimulation.

5. Nocturnal cough.

6. Red-tinged sputum, which follows acute pulmonary edema.

Digitalis is too slow, even in intravenous administration. Ouabain in intravenous doses of 1/240 gr. each, may be given every twelve hours for three doses, if digitalis has not been used during the preceding three days. Ouabain with digitalis is contra-indicated. Strophanthus, 1/100 to 1/120 gr., may be administered intravenously, but with the same precaution as above. Morphine sulphate may be used to relieve distress, or atropine in large doses hypodermically. Venesection, employed early and repeated in a few hours if necessary, is almost a specific. Glucose, 50 per cent in 50 c.c. doses, may be used intravenously in pulmonary edema and repeated every eight to ten hours if needed. Metaphyllin, 1 to 3 gr. each four hours, is later given.

CARDIAC TREATMENT IN PNEUMONIA

Depressive measures should never be used except in the presence of a high diastole in a sthenic patient. Nitrites may not respond in the presence of fever.

Supportive measures should include rest, fresh air, fluids, a rich, easily digested diet with plenty of food for fuel and repair and sufficient vitamins and buffer salts. Sedatives may be used to overcome restlessness, mental strain, anxiety, and delirium. Bleeding or oxygen inhalation may be necessary in the case of cyanosis, dyspnea and pulmonary edema.

Stimulative measures may be employed, such as caffeine, which is so quick in action as to deserve mention for emergency only; alcohol, which is of help during the first few doses, but is found inadvisable for prolonged use; glucose, or dextrose, which is more effectual (one-half of one per cent, when perfused into an isolated heart, may restore it. I previously saw a patient kept alive for three to four days and go on to recovery, with no support in food or medicine except 30 c.c. of 20 per cent glucose twice daily); ouabain and Strophanthus, already mentioned; digitalis, which we shall consider below; and adrenalin and pituitrin, both of which have been found valuable.

The subject of bleeding, mentioned in the summary above, deserves consideration. It is an emergency measure to relieve a mechanical burden. It is particularly an emergency measure in a weak, aged and undermined patient. In the normal person it may be practiced freely, but with care. In the plethoric individual with heavy blood pressure, marked with a high diastole, this usually gives immediate relief, but should be used early in failure. From Osborne we learn that in the case of serious acute congestion of the lung in a full blooded, sturdy pneumonia patient with a

high-tension pulse, venesection is often the best possible treatment. Remember, however, that bleeding saps the body of glucose and other food elements, vitamins, buffer salts, antibodies and blood corpuscles.

DIGITALIS IN PNEUMONIA

Much has been said regarding the use of digitalis in the treatment of pneumonia. Shall we use digitalis, and when?

The late administration of the drug is of little therapeutic value, while its early administration is often needless. Haphazard administration, or the forcing of the drug to obtain therapeutic results, is inadvisable and even dangerous. However, as pointed out above, its use in physiologic doses early in the advent of any cardiac embarrassment, is always advisable.

The use of digitalis in pneumonia has no action on the pulmonic tissue or on the pneumococcus or the pneumococcic process. It cannot overcome or prevent acidosis, except in the presence of an abundance of fluids, it causes a diuresis and excretion of acids. It has no effect on the toxemias present, except through the diuretic action of the drug.

It is a cardiac drug, producing specific heart effects: slowing the heart by its action upon the vagus; blocking the impulses through the bundle of His; increasing the diastolic period; improving the coronary circulation; increasing the tonicity and contractility of the musculature of both the left and right ventricles; and increasing the blood pressure slightly in a hypotensive patient.

Finally, digitalis has little action in the presence of a toxicosis, such as disturbed metabolism (for instance, in hyperthyroidism), except in the presence of an auricular fibrillation, or in the presence of marked infections such as streptococcus, although there are some exceptions to this rule.

The danger of digitalis is that overdosage frequently occurs. No therapeutic results are obtained at first, and too much is then given by the enthusiastic physician, or the patient may be a digitalis resistant, and is thus poisoned by continued administration of the drug.

The effect of the drug is cumulative, and it may be stored in the serous fluids in the presence of any edema. In the event that the drug has been forced, when the heart reabsorbs the fluid, an excess of digitalis is thrown into the circulation.

The heart then bears the burden of the pulmonic load from congestion, plus the increased respirations of the lungs from toxins, plus the toxemias of the disease, plus the toxemias of excessive or perverted metabolism, plus the toxins of digitalis.

When shall we give digitalis? The answer to

the question is, then: in all cases in which there is manifest a myocardial weakness; in the cases of the aged, undermined, hypertensive, arteriosclerotic and luetic patients; and in all cases which at onset show marked toxic symptoms. Finally, if used carefully digitalis may be employed with no deterrent effect on any patient, but some standardized method of administration must be followed. In the presence of nausea, vomiting, the finding of an extra systole, or the formation of a heart block, the drug must be discontinued.

SUMMARY

The treatment of pneumonia demands rest, fluids, plenty of fresh air, good nursing, buffer reagents, food in abundance for fuel and for repair, and vitamins, especially B 1 and B 2.

The heart must have as light a load as possible, with an early support and only physiologic doses of digitalis.

Since complications and sequelae in pneumonia are often silent in their approach, the earliest manifestation of such conditions must be recognized at once, and the possibility of heart failure must always be kept in mind.

Discussion

Dr. John F. Loosbrock, Lacona: Dr. Hall has covered this in such a modern fashion, in fact, I think he is so all-fired modern, that there is not much left to say. However, he has not mentioned the specific treatment, polyvalent serum, or so-called Felton serum. At Harlem Hospital and at Bellevue Hospital the series are run with controls. The Harlem Hospital reports showed 17 per cent mortality with 31 in the controls; Bellevue 20, with 31 in controls. That is in the Type I. Type II the difference in death rate was not so marked, and in Types III and IV it was practically ineffective.

I want to reiterate, "rest for the patient." All I can add to what Dr. Hall said about rest, is the bed-rest, so that the patient with dyspnea can be easily raised up for more comfort. Fresh air should be four plus.

The diet should be mainly liquid, with vegetable broths and custard. Jellies are usually tolerated poorly, but they should be given in small quantities. The caloric value of the diet should be as high as possible. Lactose and glucose can be added to the various liquids. A daily tepid bath is sufficient for the average pneumonia patient. Once in a while some counter-irritant can be used, but depend usually on ice-bags and opiates.

Strychnia is now a menace except in asthenic cases, as it tends to increase excitement and irritability, which are apt to appear in the toxic case.

Camphor is of value only in sudden cardiac failure. Digitalis has been much abused in the past. We now believe it should be used only in co-existent heart disease or where there is evidence of myocardial change, or auricular fibrillation. It should be given

early and to the full physiologic dose but not to the vomiting stage.

Oxygen is of value if given early, and its value depends on the amount of gas we get into the alveoli. It should be continued as long as there is any cyanosis, and it has a tendency to bolster up some of these patients until they are in better shape to handle it. Its effective administration is essentially a mechanical proposition, and better handled in the hospital, although it can be given in the home with a nasal catheter, and the operator should not be afraid to waste some of the gas.

INSULIN IN THE TREATMENT OF INFECTIONS*

ROSS E. GUNN, M.D., Boone

A large section of our time is spent in combating infection, the age-old enemy of all the higher forms of life. The body coordinates several forces in developing its various immunities. These forces include certain rays and radiations and vitamins from without, and the internal secretions.

We are all familiar with the value of insulin for diabetic patients, especially in case of infection. It is less appreciated that this particular endocrin is also useful in the treatment of non-diabetics suffering from infection. This latter premise will be illustrated by two cases, and a third, not easily identified as diabetic, will also be presented for your consideration.

Case 1: On January 12, 1928, G. M., an American, a motorman on an interurban line, formerly a coal miner, came in complaining of backache, lack of pep, and intermittent nocturia. He had never been seriously ill, he claimed, but could never lie down flat to sleep, since he could remember, because of dyspnea and cough.

Examination of the head showed a crust over the right middle turbinate of the nose and a polyp in the left middle meatus. The pharynx was dry and moderately injected. There were apical abscesses under two or three molars, as shown by tenderness on pressure and transillumination. The rest of the teeth were tartar covered and set in soggy, cyanotic gums. Chest examination showed the heart enlarged to the left, with crackles at the bases. The temperature was 98.6°, pulse 92, blood pressure 210 over 134, weight 210 pounds, height 72 inches. (He had weighed 260 pounds.) Urinalysis showed specific gravity 1.034, no albumin, no sugar.

The diagnosis was hypertension, upper respiratory infection, dental abscesses and pyorrhea.

Treatment consisted of (1) dentistry, (2) nose surgery (done by Dr. Updegraff), and (3) treatment of infection, which included a diet low in carbohydrates and rich in vitamin-bearing vegetables and fruits and some milk, with consequent gradual loss of weight. Calceose was used for a long time and

Dover's powder, 5 or 10 grains, at night when his cough was too troublesome. Cod-liver oil, 4 c.c., was used also three times a day, and later some ecto-antigens for chronic upper respiratory infections—the one called "Catarrhal Immunogen." This was followed by some loosening of secretions and then a reduction in their volume and a greater sense of comfort.

In 1929, this line of treatment was repeated and because of an aggravated asthmatic feature, 10 c.c. injections of cow's milk were given intragluteally. Very definite but imperfect relief followed. Carbon arc exposures were also tried a few times. On March 13, we noted very evident bronchial signs; sonorous and crackling rales. On January 13, 1930, there were dyspnea, sonorous rales and an irregular heart. Treatment was instituted as before.

On March 1, an anaphylactic reaction followed a 10 c.c. injection of cow's milk. This was controlled by 1 c.c. of 1:1000 adrenalin.

On March 9, he had severe lumbar backache and partial obstruction of the intestines. X-rays by Dr. B. T. Whitaker showed obstruction at or proximal to the hepatic flexure, a large heart, and heavy bronchial markings.

On March 29, Dr. Luginbuhl diagnosed hypertensive heart disease, rheumatic in origin, with definite cardiac enlargement. He recommended bed rest from four to eight weeks, extraction of teeth, and digitalis if signs of heart failure appeared. The patient went to work on April 5.

On April 7, his weight was 175.75 pounds; his blood pressure was 170 over 85. He did well until he "took cold" about July 1.

On July 19, he was short of breath and suffered substernal tightness and oppression. His pulse was 86, the apex 91; his weight, 184 pounds; respirations, 32. There were crackles at both bases of the chest.

The urine was cloudy, amber in color, specific gravity 1.034, albumin 3 plus, sugar 1 plus.

The treatment included many things: calcium gluconate 10 c.c. in place of the cow's milk because of the allergic feature, and Paroidin for the same reason. Morphine and allonal were tried to secure rest at night. Digitalis was used to the physiologic limit.

On July 31, the twenty-four hour amount of urine was only about 60 c.c. Anasarca was proceeding steadily in spite of treatment.

On August 2, the pulse was 114, respiration 31. There were fine rales at the bases of the chest, and piping rales over the rest of the chest. The liver was tender. Abdomen contained about 2000 c.c. of free fluid. There was 3 plus edema of the ankles and feet. The twenty-four hour urine output was 1020 c.c., specific gravity 1.038, acid 1 plus, albumin 2 plus, sugar 3 plus. Insulin treatment was begun, with a dosage of 20 units a day.

On August 3, the urine output was 2000 c.c., on August 4, 1500 c.c., and on August 5 there was 2500 c.c. of clear urine, specific gravity 1.018, no albumin and no sugar. He could lie flat and breathe easily for the first time that he could remember.

*Presented before the Boone-Story County Medical Society, January 22, 1931.

All edema gradually disappeared and the infection improved.

On August 16, he requested permission to return to work. On August 18, he began working five days a week, from 3:30 to 11:30, on a switch engine. Events went along very smoothly until October 8. It was then found necessary to put him on a definite intake for a mild diabetic weighing 170 pounds. His infection got worse, his weight increased and his blood pressure was elevated.

On November 22, he had finished a course of influenza vaccine combined (Squibbs No. 8).

On December 8, he said, "I feel better than I did a year ago, but I can't get rid of that burning." He meant burning on urination. At that time he was working six nights a week. His temperature was 96.7°, his pulse 68, and regular respirations 16, blood pressure 157 over 87, weight 182 pounds. There were a few crackles at each base of the chest, posteriorly. The heart remained large, the tones were about normal. The urine was neutral, specific gravity 1.022, negative for pathologic sediment, albumin and sugar. The treatment consisted of digitoxin 0.1 per day, 12 units of insulin twice a day, and viosterol 1. per day.

On December 29, he still felt better than a year before and was sleeping better. His weight was 179 pounds, blood pressure 173 to 178 over 90 to 95, pulse 68, respirations 18, temperature 97.3°. The crackles at the chest bases persisted, but were not so numerous. The urine showed specific gravity 1.024, no pathologic sediment, acid 4 plus, no albumin, a trace of sugar. Twenty units plus 16 units per day of insulin were given, and digitoxin 0.1 per day.

This case record is presented because of the marked relief from asthma, from high blood pressure, and from the other symptoms of infection, when all other treatment was failing to give relief.

Case 2: On August 1, 1930, L. B., a colored man, aged thirty, appeared for examination, complaining of abdominal pain. He had been severely constipated since an appendectomy performed by Dr. McCarthy two or three years previous. Because of obstipation, visible and palpable peristalsis, and no flatus in spite of hospital care, various standard enemas, pituitrin and eserine, a diagnosis of acute obstruction was made and laparotomy was performed. When the patient was returned to bed he began to spit a dirty gray sputum and coughed as he informed me he had done since an illness he suffered in service in the army during the late war. He also had well marked clubbing of the fingers and medium moist rales at his bases. Large amounts of sputum were present in the mornings. We gave 12 units of insulin twice a day and within a week the sputum and cough disappeared.

On November 26, he said he was still free from cough and sputum except when he had a cold. He claimed he still had abdominal pain. We had learned in the meantime that his ileus was paralytic, due apparently to reflex causes. Obstruction of the left ureter resulted late in August in complete uri-

nary suppression for about a week. During the latter half of that week we stopped his insulin and never resumed it.

Dr. Deering was my consultant and Dr. Jones also saw the patient, as did Dr. Whitehill, I believe. The specific gravity of the urine was 1.018 and there was never any sugar. Stones in the left ureter and right renal pelvis were found by Dr. Alcock recently.*

Case 3: M. A., a white woman, aged fifty-nine, a widow for thirteen years, had been subject to gall-stone attacks up to the time of cholecystectomy in July, 1929. These attacks had continued twenty-seven years following an attack of typhoid. Operation was performed by Dr. Synhorst, of Des Moines. In a personal communication he reported extensive hepatitis as well as stones in the gall-bladder. The patient had always complained of two things chiefly: backache and nervousness. Operation was followed by freedom from attacks of colic but the pain through the liver area and the nervousness remained.

On examination, August 22, 1930, the principal findings were a normal temperature, pulse 98, blood pressure 135 over 85, respirations 30, and weight 135 pounds. Her weight on August 1, 1929, had been 110 pounds, and at one time it had been 155. The heart showed tick-tock rhythm, but the tones were rather firm and strong. Palpation of the chest and abdomen revealed tenderness in the right mid-axilla and over the blunt lower edge of the liver, three fingers below the right costal margin, especially from the flank to the eighth costal cartilage. Percussion was dull throughout the right axilla and dull to flat at the left base posteriorly up to the sixth dorsal vertebra. Examination of the back, with the patient attempting to stoop, showed limitation and stiffness in bending. The specific gravity of the urine was 1.019, with 4 plus acid, clear, no sugar, no albumin, and 1 plus bilirubin.

The diagnosis was hepatitis.

The patient was given 12 units of insulin daily, acetylsalicylic acid 0.67 gram every four hours, phenobarbital 0.1 gram daily at 7:00 p. m., for three doses.

On September 2, she reported no change in herself, and was still very nervous.

On September 27, she felt much better and stronger and said that she was sleeping nights, that her back ached less, she could lift more weight, the soreness in liver area was less, and she felt more energetic and cheerful. Her weight was 138.25 pounds.

On December 8, she had had no insulin for three or four weeks. The general and nervous conditions were better than for twenty or thirty years. The spells of backache were less frequent and less severe. The liver tenderness was nearly gone. Her capacity for work had very greatly increased. Insulin was resumed.

On January 8, 1931, the patient reported that her backache had practically disappeared. She was still taking a small amount of insulin.

* Note: Intestinal obstruction also occurred when the patient was in the University Hospital, and a laparotomy was performed. Definite obstruction was reported but no cause named. He had never had a full recurrence of cough and sputum up to June 12, 1931.

It has been known for a long time that some infections are accompanied by a rise in blood sugar content. I could easily cite case reports tending to show that insulin is a very helpful agent to use against infections, having used it routinely since August 2 on chronic respiratory infections, in addition to the other treatment. Besides the fact that the infection is so signally improved there is exhilaration and a loss of that dragged-out feeling so many patients have with a chronic infection. Possibly the whole process is one of oxidation. Even the mental processes are quickened. A very small daily dose—say 8 to 12 units—may change a patient from a laggard to a cheerful worker. Later check-up resulted in report of good health.

Author's Comment: Since this paper was read I find 16 units of insulin to a pneumonia patient once or twice a day gives marked benefit. Either my cases are very mild or the treatment shortens the course about half.

A boy of 9 became ill July, 1931, with osteomyelitis in lower end of left femur. This was later confirmed by x-ray. By use of cod liver oil and insulin the lad has been about as usual except for the first three weeks and a two weeks spell in November, in absence of any treatment at that time. After about two weeks' resumption of treatment he returned to school almost without limp, with no shortening, and with no contracture.

Ten units of insulin lessen postoperative nausea.

College of Medicine State University of Iowa

(From the Proceedings of the University Hospital Medical Society.)

HYPERTHYROIDISM AND PSYCHOSES

WILBUR R. MILLER, M.D.*

In this paper factors of hyperthyroidism are presented from the psychiatrist's point of view. The predominance of nervous signs associated with the disease immediately introduces nice points in differential diagnoses. A large number of frankly psychotic patients are received in the Psychopathic Hospital in whom thyroidectomy has been performed without adequate evidence of hyperthyroidism. On the other hand, there are certain toxic psychoses in whom the etiology of hyperthyroidism is overlooked. The general practitioner, because his training is directed chiefly along lines which direct his attention to the soma rather than to the psyche, and because patients prefer to have an organic explanation rather than

a psychic one, often fails to realize an opportunity of making a diagnosis of mental disease in these patients. The attention given by laymen to thyroid conditions has increased the number of psychoneurotics complaining of symptoms which closely resemble hyperthyroidism. The typical symptoms of anxiety states closely resemble those of exophthalmic goiter.

In the causation of hyperthyroidism, the importance of mental and emotional factors are discussed in relation to the etiology of the disease. The importance of the type of mental symptoms associated with thyroid disease is also stressed.

Cases are presented illustrating the following types of problems:

(1) A patient with an anxiety neurosis which was mistaken for hyperthyroidism and in whom thyroid was removed with increase in the nervous symptoms: This patient attempted suicide before coming to the hospital. No basis for the diagnosis of hyperthyroidism could be discovered beyond the subjective complaints. Patient improved under psychotherapy and was discharged from the hospital.

(2) Psychosis in a woman with an adenoma of the thyroid, characterized by hallucinations, misinterpretations and negativism: Removal of the thyroid removed these factors, and the patient now shows a mild euphoria with some signs of deterioration.

(3) Agitated depressions appearing in young adults in whom the signs of overactivity, rapid pulse, and unreliable basis of metabolism secured in this state of excitement, make the diagnosis of hyperthyroidism a probable one. Removal of thyroid in these states usually makes the psychosis more acute and difficult to handle.

(4) Involutional psychoses with agitated depressions, if occurring before cessation of the menstrual function, often tempt one to lay the blame upon hyperactivity of the thyroid.

The following points were made in summary:

(1) Hyperthyroidism may be ushered in by symptoms which are predominantly nervous and mental in type, before the classic physical signs are present.

(2) Psychoses may be precipitated as the result of the toxicity of an overactive thyroid as well as other toxic factors.

(3) Anxiety neuroses and agitated depressions belonging to both the manic-depressive group and the involutional period may present conversion symptoms or hypochondriacal ideas which closely simulate the physical findings of hyperthyroidism.

(4) Thorough histories and adequate investigations of the personality of the patients should always be taken in order to arrive at a more com-

* Psychopathic Hospital.

prehensive understanding of the individual problem.

(5) Thyroidectomy is not justifiable on the chance that it may relieve nervous or mental symptoms when the indications are not adequate to make a diagnosis of hyperthyroidism. Psychotherapy is a more rational approach and will always benefit the patient to some degree in making an adjustment to his difficulty, whether it be organic or functional.

THE ACTION OF PAPAVERINE ON THE MUSCULAR ACTIVITY OF THE ALIMENTARY CANAL

ERWIN G. GROSS and DONALD SLAUGHTER*

Plant and Miller in 1928 studied effects of opium alkaloids on the musculature of unanesthetized dogs. Their work was chiefly on morphine but also on papaverine and they found the response in the stomach to be a decrease in tone and contraction while in the intestine an increase in tone and contraction was found.

Gruber and Robinson in 1929 confirmed the morphine work of Plant and Miller but not the papaverine experiments. They used only intravenous injections whereas Plant and Miller used three routes of administration.

We have re-investigated the action of papaverine on the alimentary tract using the fistula method of operation and the balloon bellows method for recording results on slow kymograph.

Eighty-one experiments were performed on ten dogs: Fifty-seven on five animals on the small gut, eight on two dogs on the stomach, and sixteen on three dogs on the colon. Papaverine was tested and found to be free of morphine. The dogs were all normal and healthy.

On the small intestine papaverine has no action except when given intravenously (4-5 mgm. per kgm.) after morphine has increased the tone. Using comparable doses as mentioned above, subcutaneous, intramuscular and intravenous injections of papaverine lowers the tone and cuts out most of the peristaltic wave in the stomach. All three types of injections produced some cutting out of peristaltic waves with no decrease in tone except when given intravenously following morphine. This is the type of action seen in the colon.

Papaverine does not prevent the action of morphine. It causes symptoms (dyspnea, polypnea, cyanosis, tremors) in doses large enough to show pronounced action (5-10 mgm. per kgm.) which are not compatible with its use in treating visceral spasm as recommended by Gruber, Robinson and Macht. We believe it has no significant clinic value in treating visceral spasm.

* Department of Pharmacology.

ANNUAL MEETING IOWA TUBERCULOSIS ASSOCIATION

Thursday and Friday, February 25-26, 1932
Hotel Burlington, Burlington, Iowa

PROGRAM Thursday, February 25

- 8:30 to 9:30—Registration, Mezzanine floor.
- 9:30—Seal sale meeting.
Presiding—Frances Brophy, New York.
Scenario—The county seal sale meeting.
- 10:30—Letters, good and bad—A. W. Jones, St. Louis.
Discussion.
- 11:00—Scenario, the January meeting; reports, elections, and plans for the use of the funds.
- 12:15—General luncheon.
H. M. Cass, Huron, South Dakota.
W. P. Shahan, Springfield, Illinois.
J. W. Becker, St. Louis.
- 12:15—Luncheon at Hotel Burlington by the Des Moines County Medical Society, President G. A. Chilgren, presiding.
The medical program follows the luncheon:
Home Management of Pulmonary Tuberculosis—Alfred Henry, M.D., Indianapolis, President National Tuberculosis Association.
Sanatorium Care of the Tuberculous—Wm. M. Spear, M.D., Oakdale, Assistant Superintendent State Sanatorium.
Tuberculin Testing and Immunity—E. A. Meyerding, M.D., St. Paul, Secretary Minnesota State Medical Society.
Complications of Tuberculosis—Max Biesenthal, M.D., Chicago, Vice President Mississippi Valley Conference.
Diagnosis of Tuberculosis in Children—Jago Gladston, M.D., New York, Director Health Education, National Tuberculosis Association.
Early Diagnosis of Tuberculosis in Adults—H. E. Kleinschmidt, M.D., New York, Medical Director, National Tuberculosis Association.
- 2:00—General Session.
The Iowa White House Conference—D. C. Steelsmith M.D., State Commissioner of Health.
Social Hygiene instruction—a problem for parents, teachers and nurses—Mrs. S. E. Lincoln, chairman Social Hygiene Committee, Iowa Congress of Parents and Teachers.
The County Health Unit—Carl F. Jordan, M.D.
Our hearts—I. C. Riggins, M.D., Secretary American Heart Association., New York.
Unemployment and health—Effie Doan, member Governor's commission on unemployment and relief.
- 6:30—Annual Dinner.
Presiding—John H. Peck, M.D., President Iowa Tuberculosis Association.
- 9:15—Bridge and dancing.


Friday, February 26

- 9:30—Case Finding Institute—morning and afternoon, of especial interest to nurses, teachers, club women, social workers and physicians.
Case finding—Why? How? Whom?
Discussion leader—H. E. Kleinschmidt, M.D., New York.
- 11:00—Case finding among children and the tracing of contacts.
Leader—Jago Gladston, M.D., New York.
- 12:15—General luncheon.
Publicity—A. Schaeffer, Jr., New York.
Discussion—J. Tracey Garrett, Editor Hawkeye, and Thomas Green, Editor Gazette.
- 2:15—Plans for the early diagnosis campaign—A. Schaeffer, Jr.
The permanent clinic as a case finding device—Lucy McMichael, former superintendent V. N. A., Council Bluffs.

EXAMINATIONS BY THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next written examination of the American Board of Obstetrics and Gynecology will be held in nineteen different cities of the United States and Canada at 2 P. M. on Saturday, March 26, 1932. The general, oral and clinical examinations will be held in New Orleans on Tuesday, May 10, 1932, immediately preceding the meeting of the American Medical Association. Reduced railroad fares will be available. For detailed information and application blanks apply to the secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pennsylvania.

STATE HEALTH COMMISSIONER'S PAGE

 *D. C. Strickland, M.D.* 

SMALLPOX

THE GENERAL PRACTITIONER
PREVENTIVE MEDICINE

Since vaccination will prevent smallpox there is no need of having smallpox in our midst. Although smallpox kills relatively few people, Iowa has experienced seventy-seven deaths from smallpox during the past eight years, five of which occurred in 1931. The incidence of smallpox has been increasing steadily since 1924, no doubt due to the laxity of vaccination.

Two thousand, two hundred twenty-five cases of smallpox were reported in the state during 1931. About 50 per cent of the cases were in adults or wage earners. Therefore the loss of earnings amounted to more than \$100,000 annually. The loss of time of others than wage earners (such as students) would account for at least \$50,000.

The cost of quarantine, physician's fees, and other items, at \$15 for each case, would amount to \$30,000 more, making a total loss to the public of

at least \$180,000 annually due to smallpox. The time lost to the people of Iowa in quarantine for smallpox each year is equal to the whole lifetime of two people or the whole year spent in quarantine by 130 people.

Physicians now obtain about \$10 (in money) and much grief from every case of smallpox.

There are approximately 45,000 live births each year in Iowa. If the practicing physician would vaccinate each child before he is one year of age, he would render the public a great service, and hundreds of thousands of dollars each year would be saved.

While rendering this valuable service to the public, the physician would probably double or quadruple his income by the practice of preventive medicine.

How many of your families are immune to smallpox?

Vaccination Will Prevent Smallpox

PREVALENCE OF DISEASE				
DISEASE—	Dec. 1931	Nov. 1931	Dec. 1930	Most Cases Reported From
Diphtheria	124	83	55	Polk, Pottawattamie
Scarlet Fever	186	201	338	Polk, Cerro Gordo
Typhoid Fever	8	16	7	Jasper
Smallpox	241	258	106	Pottawattamie
Measles	16	13	15	Linn, Polk
Whooping Cough	118	111	42	Black Hawk, Greene
Chickenpox	359	356	449	Black Hawk, Woodbury
Poliomylitis	12	37	12	Kossuth, Des Moines
Tuberculosis	21	33	15	Wapello
Syphilis	181	173	160	Polk, Johnson
Gonorrhea	318	299	148	Polk, Woodbury

The JOURNAL of the Iowa State Medical Society

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THE PHYSICIAN AND THE RADIO

The present tendencies in the social and economic life of the physician have created many new responsibilities and in many ways added to his opportunities for public service in matters pertaining to the medical welfare of the public.

The radio has become recognized as an important educational medium and one which is readily adaptable for the dissemination of information to all classes. Because of its popularity, it is one which reaches perhaps a greater number of persons than any other avenue open for general educational purposes today. Second to the radio are the lay press and popular magazine publishing articles dealing with health problems. Because of the newness of radio as a medium of education, its use by physicians becomes one of immediate and timely interest.

A few years ago, the members of the Polk County Medical Society were invited to broadcast medical talks over an Iowa station and a series of ten such talks, sponsored by the society, was delivered. Since this time other programs have been given by physicians, some under the society's sponsorship and some without their knowledge or approval. At the present time a series of medical talks sponsored by the Speakers Bureau of our State Society, is being broadcast over two separate Iowa stations.

The American Medical Association has gone on record as approving and encouraging this form of publicity. Several state societies have endorsed this program and the Medical Society of the County of New York, together with the New York Academy of Medicine,* has recently formulated and adopted rules governing this as well as other phases of medical publicity.

In preparing these rules they have recognized the singular problems presented by radio broadcasting and have attempted to meet these problems specifically. Believing that it is highly desirable that the medical profession should take advantage of the opportunities presented for health education by the radio, they have encouraged their members to respond promptly and positively to any requests for programs of this nature. They believe that the material used by a physician in his broadcast should bear the endorsement of their publicity committee or the county society of the county in which he resides. They request that the physician presenting the paper be introduced with only one scholastic title. They further suggest that any official or chairman of a committee of a medical society presenting an extra-scientific subject use only the title of his office and not any of his personal titles.

To guide physicians who desire to write articles for lay consumption, they have submitted and illustrated the following definitions:

A. Permissible medical publicity is the issuance of a public report concerning an event of general interest or importance. It stresses the happening rather than the individual. Examples of this group are to be had in the election of new officers in a medical organization; the opening of a new hospital; the award of a prize for distinction in medicine and the like.

B. Undesirable medical publicity is the publication of individual activities designed to magnify the importance of that individual in the eyes of the public. In such publicity, the comings and goings of the individual are featured, his connections, achievements and honors are mentioned and he is thereby deliberately and often without any warrant given undue prominence in the public eye.

C. Propaganda is a systematic effort to gain public support for public health activities and has for its main objectives the arousing of public interest in supporting and acting on health matters. In propaganda, emphasis is placed upon some matter of public health interest and only incidentally upon the physicians connected with it. Tuberculosis prevention, cancer control, and diphtheria prevention are legitimate public health items for propaganda.

D. Public health education is the impartial instruction of the public in facts related to the prevention and treatment of disease. It stresses the facts rather than the individual presenting them. Public health education differs from publicity and propaganda by the nature of its content. A statement, for example, that measles is a much neglected and dangerous disease made by Dr. Jones may serve as a typical example of a public health

* Approved by Council of the New York Academy of Medicine, May 27, 1931. Approved by Comitia Minora of the Medical Society of the County of New York, October 9, 1931.

education message. Such a statement should not give prominence to its maker. On the other hand, the statement is given impressiveness and authoritativeness when emanating from a representative physician or from an official medical body.

The physician speaking on the radio should be considered as the vocal representative of the medical profession addressing the public. He brings to the public the fruits of many men's labors. In this he is the custodian and administrator of the wealth accumulated by the scientific endeavors of the profession. His personal interests and individual convictions must be placed secondary to the interests and dominant convictions of the profession.

With this in mind, a physician in his address must not give endorsements nor testimonials for the products sponsoring the broadcast. He should determine in advance the nature and scope of the advertising material employed by the announcer so that his appearance cannot be construed as supporting unwarranted or exaggerated claims which have been made prior to his introduction. To avoid any embarrassment or criticism in this regard, it is advisable that the physician making the broadcast should have received the endorsement of a recognized medical unit and in his introductory remarks announce that the program is being given under this sponsorship.

The Iowa State Medical Society has not as yet adopted rules and regulations for the guidance of its members, but, no doubt, this problem will receive consideration at an early date. Pending such official action, we believe that the principles and rules reviewed above will furnish on the whole a safe program for the guidance of our members and we further believe that if the principles underlying and prompting these rules and regulations be fully understood that the guiding spirit of our published principles of ethics will be sufficient guide for the average physician.

A FRONTIER NURSING SERVICE

The novel methods by which a handful of women nurses have in six years brought medical care to a remote rural area, typical of many in the United States, where no doctor could make a living and the people were too ignorant and poor to care for themselves, are described in a study just published by the Committee on the Costs of Medical Care.

The study gives a glimpse of one of America's still-existing frontier regions in the back country of Kentucky, where social and health conditions were all but medieval and where it costs a dollar a mile to bring a doctor into the wilderness on a visit.

In a part of this district the Frontier Nursing Service maintains its health outposts, whence nurse-midwives ride out on horseback to combat squalor, ignorance and disease. The study, by Anne Winslow, executive secretary of the Frontier Nursing Service, tells how these women have succeeded at moderate cost in providing midwifery, nursing, surgical, medical, dental, hospital and social services for the region.

The Committee on the Costs of Medical Care brought out Miss Winslow's study of the frontier nurses as one of its "Miscellaneous Contributions" because such activities come within the scope of the committee's five-year investigation, now nearing completion, into the problem of "the delivery of adequate, scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life."

The portion of the frontier on which the Service operates lies in Leslie, Perry, Clay, and Bell Counties, Kentucky. The organization was established through the work of Mrs. Mary Breckenridge a graduate nurse, who made the first survey in 1924, with a view to determining the health needs of the region and devising a way to meet them. Her visit was followed in 1925 by a survey in Leslie county by Miss Bertram Ireland in conjunction with the State Board of Health of Kentucky, to check up on unreported births and deaths.

At the time, Miss Winslow writes: "There was no physician in Leslie county, and in one contiguous area of three counties surveyed there were 15,000 people without one registered physician. In this area it took the nearest doctor six to twenty hours on horseback to reach a patient. Necessarily, the average fee of one dollar a mile was prohibitive for any but a few families; the average total income per capita was under \$143.00 a year."

Doctors charged one dollar a mile to call because of the unusual conditions; namely, that a single call often meant an overnight trip, none of the towns were on railroads, none of the counties were connected with the outside world by automobile roads and: "The customary mode of travel and often the only possible one was on horseback along such roads or trails as existed through creek beds, and over the ridges of mountains."

"Epidemics of typhoid fever, diphtheria and smallpox occurred frequently. Owing to their ignorance of any form of sanitation, the people were riddled with hookworm. There was no ventilation in the cabins; babies and children slept with their parents, and tuberculosis invaded whole families."

The birth rate was almost twice that of Kentucky as a whole, and while the death rate was of-

ficially reported as lower, this was probably because many of the natives died in the back country, without medical attendance, and without any record. Unrecorded deaths were estimated to be about 35 per cent of the number recorded. Deaths from preventable diseases constituted more than half of the total.

Native midwives, whose age averaged about 60 years and who were untrained and unqualified for their calling, and self-styled "doctors," practiced among these people.

After Mrs. Breckenridge had visited the region she decided, writes Miss Winslow, "that the health of mothers and children was the most urgent problem and that the situation called for trained nurse-midwives, who might combine a program of public health and bedside nursing with midwifery."

The Frontier Nursing Service grew out of this belief. It consists at present of 28 nurses, on duty at nine nursing centers. There is also an eighteen-bed hospital, built three years ago.

Two nurses are stationed at each of the centers, and three at the hospital. The centers are houses equipped with living accommodations for the nurses and a clinic for patients. The nurses at a center divide between them an area of about 78 square miles, and each of these women covers her own district on horseback.

She is equipped with two sets of saddlebags, one with material for general nursing, the other for obstetrical work. On the basis of their midwifery training, the state health officer gives the frontier nurses special licenses to care for normal deliveries. A collaborating medical advisory committee drew up a "medical routine" which also authorizes the nurses to give certain treatments and medications pending the arrival of a doctor.

Scattered through the neighboring counties are a few doctors who can be called upon whenever necessary, and there is a surgeon in the nearest town, twenty-three miles from the Service's hospital.

If a doctor is called, he may be an overnight trip distant, and his fee may be as much as fifty dollars for a call. This is far beyond the reach of the purse of practically every family in the district, so the Service underwrites the bill, the patient paying as much as possible.

The hospital of the Frontier Nursing Service has a physician in part-time attendance who also serves as health officer of Leslie county. His salary is paid jointly by the Service and the state, and his office was created largely due to the interest aroused by the work of the frontier nurses.

The Service itself charges five dollars for prenatal and postpartum care, including delivery. Besides this, a fee of one dollar a year entitles any

individual or family to public health nursing service, and bedside care in the case of illness, and families unable to pay this much are cared for without charge.

In their last fiscal year, the nurses of the frontier service attended 9,736 people in 1,851 families, making 47,827 visits. This included 441 deliveries and "false calls."

The total cost of the service was \$106,406.49 for the year, averaging \$10.92 per patient actually served, but the entire 9,739 patients were able to pay only \$3,367.43 of this total.

CHRISTIAN HEALING

At the recent convention of the Protestant Episcopal Church, held in Denver, the question of "Christian healing" was again discussed.* Their commission, while evidently desiring to evade a direct statement relative to the efficacy of "faith healing" or deny the attitude of the church of a decade ago, focused attention upon the relationship and the distinctions between religion and medicine in their wordy but inconclusive report.

It will be recalled that about 1922 the Episcopal Church authorized a "ministry of healing." Clergymen of that denomination were urged to prepare themselves for ministering to the sick through the mediums of faith and prayer.

The action, which, in effect, placed that church's stamp of approval on methods of treating the sick through prayer or other spiritual means, was taken in the wake of an outbreak in the public press of reports from many communities of the "amazing cures" by so-called spiritual healers and a wave of "healing madness," as one official religious publication chose to call it, among the clergy of a number of religious denominations.

During the past nine years, numerous committees and commissions of the Episcopal Church have made surveys and studies on the question of spiritual healing. Periodically, reports and recommendations on the question have been made to the governing body of the church.

What is presumed to be the "last word" on the subject, at least so far as the Episcopal denomination is concerned, is the report of the joint commission on "Christian healing" made at the Denver meeting, in which, according to Associated Press dispatches, it was recommended "that those who practice such healing in the church operate in co-operation with the medical profession."

The commission pointed out to the convention, according to newspaper accounts, "that, while the church must teach that spiritual healing is an integral part of the gospel of Christ and part of the pastoral office, it must not teach or use any meth-

* Ohio State Med. Jour., Dec. 1931, p. 973.

ods tending to lead people to believe it is the only, or even the primary, element of that gospel."

"No sober minded man," the report, as published in the press, stated, "can dispute what materia medica has done for humanity to alleviate the suffering caused by disease and accidents and the practical eradication of certain diseases."

"We may believe that this progress in medical science has been due to certain illumination of the spirit of God. The church will not fail to give due credit to the medical profession for its noble work for poor suffering humanity."

The primary stress of a constructive movement, the commission was reported as suggesting, must be placed on "health" and not on "healing," and by stressing health the church must have an effective message to the sick as it now has for the sinful.

"Many today would stress what is called 'the sacrament of unction,'" the report pointed out. "To them it has not only the psychological but also sacramental value. It is clearly spiritual and has behind it the authority of apostolic times. We rejoice that there is a form of service for its administration. But no one, however high the value he placed on it, would question that it is only a means to a spiritual end."

"A sane constructive health movement cannot be based upon the use of consecrated oil; that is not its primary truth. The same may be said of 'a gift of healing,' so much disputed and about which we know practically nothing. No movement could be based on that."

A Denver newspaper in a published story on the report said:

"As a fundamental principle, the commission declared that 'communion with God, in Christ, practiced in the right way, results in a marked increase in vital energy.'"

"It releases the inner curative tendencies of the body, and augments them with what we may believe is the infinite power of Almighty God."

"Effective prayer has the effect of potent tonic; it vitalizes and energizes the whole personality of man. And this is what we mean by what we crudely call spiritual healing."

"At the same time the commission issued a warning 'to avoid all weird speculations and eschew all sensational methods of healing.'"

"According to the commission, 'The problem with the sick is to find means of releasing Christ's power to heal. We may be so clogged up with inhibitions of all kinds, with passions and lusts, fears and depressions, worldliness and materialism, that we thwart the Divine Will.'"

The obscurity of many passages of the report have a tendency to dim the meaning of the report as a whole. Just what the commission believes the

church should do and how, in the field of healing is not exactly clear. On the other hand, the report deals in detail with various prohibitions which the clergy are cautioned to regard in the conduct of their pastoral duties.

In fact, the report as a whole seems to be for the most part negative, reciting at length many things which should not be done and leaving the clergy guessing as to what should be done. To those who are familiar with the suggestions and recommendations found in previous reports on the same question to the same body of clergy, the Denver report may have significance.

Some interesting deductions may be drawn by comparing this latest summary on the question with some of the earlier pronouncements on "Christian healing." At the outset, it is evident that almost a decade of consideration has tempered to a large degree the spontaneous and bubbling enthusiasm shown by the Episcopal clergy for a mass movement in spiritual healing. Also, it is evident that events of the passing years have raised innumerable doubts in the minds of many leaders of that denomination as to the un-failing power of religious faith and prayer as a panacea in all kinds of sickness. The report indicates that after a decade of thorough investigation and study there has been unearthed little, if any, evidence that faith or religion even in a small measure can be substituted for medical science.

Finally, by the sounding of warnings and an emphasis on "don'ts", the report, in effect, admits that too great reliance has in the past been placed on the tenets of "Christian healing" and that sad and disastrous results have in many instances followed.

The suggestion of cooperation between the clergy and the medical profession is not new. The combination of these two forces interested in the welfare of mankind has on innumerable occasions produced beneficial results. A closer cooperation and coordination would probably result in additional and greater benefits to the laity.

It must be admitted that there is nothing in this latest pronouncement which should in any way alter the existing opinion of the medical profession concerning "Christian healing."

The medical profession always has frankly conceded that there can be no reasonable question but that the mental attitude of a patient may have much to do with his desire and determination to recover from a serious illness. It has agreed that a clean mind, stimulated by religious and moral teachings, may have a decided influence on an individual and help him to avoid transgressions and intemperances which result in physical disabilities. That a

proper spiritual attitude is of benefit to the physician in serving his patients, likewise is true.

The medical profession with its scientific knowledge of the human organism and its years of clinical experience cannot subscribe to any fallacious assumption that religion may be substituted for medicine in abolishing disease and repairing physical wreckage, any more than it can support any contention that medicine may be substituted for religion in dealing with questions that are distinctly moral, spiritual and religious ones. Each has a distinct function to perform and each must realize its proper field.

As emphasized in the Denver report, spiritual guidance, faith, and prayer should continue to be but aides of scientific medicine in so far as any attempt is made to utilize them in dealing with diseases of the mind and body.

MOTION PICTURES AND EYESTRAIN

Viewing motion pictures entails less eyestrain than reading a book for a corresponding length of time.* Under normal physiologic conditions, moving pictures do not cause serious eye fatigue. Since viewing moving pictures is distant vision, it does not demand so great an ocular effort as near vision—such as reading for the same length of time. When eyestrain is caused by moving pictures it is due to one or another preventable condition, such as too prolonged fixing of the attention on a single point, to defective visual function, to a bad position of the observer in relation to the screen, to poor films, to improper manipulation of the apparatus, or to faulty projection or to improper illumination. With these reservations there is no more harm to the eyes in viewing moving pictures with modern improved methods than there is in any other normal use of the eyes.

In a recent inquiry which was instituted by Professor De Feo of Italy and presented to the League of Nations, opinions were secured from leading eye physicians throughout the world. The agreement was general in the views expressed. There are four elements to be considered in an inquiry as to whether moving pictures can in any degree be injurious to the eyes of the observer. These have to do with the quality of the film, the arrangement of the lighting, the mechanism of the motion, and the position of the observer. The final and important requirement is that his own eyes shall function normally.

The first requisite is that the screen picture shall be clear and distinct. The captions and other descriptive matter accompanying the view should be sufficiently large to be easily read and not so

redundant that the reading may not be easily completed before it disappears.

It is better that the hall in which the picture is shown be not too dark. Strong contrasts of light and darkness are not pleasant and the details of the picture are brought out with even greater clearness in a twilight atmosphere if there are no distracting light sources. It is imperative that the film be run through with just the right degree of rapidity to make the images stand out and to move with the deliberation of actual living people.

It is also important that films be retired from service after a reasonable amount of use.

The position which the observer occupies in relation to the screen contributes very much to the eye comfort. If he is too close to the screen the pictures become blurred and confused, and defects are emphasized. The same effect is produced if the picture is viewed from too great an angle from one side or the other. Sometimes these nearer inferior seats are cheaper and are occupied by children whose eyes are more easily harmed by the resulting strain than would be the eyes of older people. Children should not be allowed to occupy these less desirable positions. The best place from which the picture can be viewed is near the center of the hall and directly in front of the screen.

The final requirement, if the film is to be seen without discomfort, is that the eyes of the observer shall be functionally normal and of good visual acuity. When in the absence of any of the defects above mentioned—in the screen, in the evenness with which it is shown, in the illumination and in the position of the observer—there is still a consciousness of strain which is not occasional but persistent, it is safe to assume that there is present some ocular defect that should be corrected.

THE COMING MEETING OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

The Medical Society of the Missouri Valley will hold its annual meeting this year in Omaha, March 29, 30, and 31. Headquarters will be in the Hotel Fontenelle.

Those attending last year's meeting, held in Des Moines, proclaimed it as one of the most interesting of the many held by the society since 1873. The program was well balanced and the entire proceedings well handled by the local committee.

The purpose of the society is to bring to the physicians of the middle west a program such as would be attainable only by traveling some distance and with the outlay of much time and money. In other words, the Medical Society of the Missouri Valley brings to your backyard what you would travel far to get.

Societies with such purposes are becoming more

*The Sight Saving Review, September, 1931—"The Cinema and the Eye." Park Lewis, M.D.

popular and are enthusiastically supported by the physicians whose territory they serve. Naturally it is only through large attendance that such organizations can prosper and hope to build the better meetings of tomorrow.

The Medical Society of the Missouri Valley has made steady progress since its reorganization in 1928. Last year it was changed from the membership type of organization with yearly dues to one calling only for a registration fee of \$5.00 for those attending the meetings.

This year's program is practically complete. Physicians representing different sections of the practice of medicine and country have accepted invitations to take part in the program. The next issue of this JOURNAL will contain the program.

Among those already having accepted invitations to address the society are, Drs. J. C. Bloodgood, Baltimore; F. Lahey, Boston; Loyal Davis, Chicago; Alvarez and Helmholtz, Rochester, Minn.; A. Kuntz, St. Louis, and Burt Shurly, Detroit.

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Announcement has been made that the Annual Congress on Medical Education, Medical Licensure and Hospitals, held under the auspices of the American Medical Association, will convene on February 15 and 16, 1932, with headquarters at the Palmer House at Chicago.

The program offered this year will be of unusual interest and importance to all physicians since many problems of particularly timely importance will be presented. The teaching of medicine in both the undergraduate and graduate medical schools occupies a conspicuous place on the program as well as the various functions of the hospital in the training of physicians and the problems of the State Boards of Medical Examiners.

On Monday afternoon at a joint session of the Council on Medical Education and Hospitals and the Federation of State Medical Boards of the United States there will be presented a symposium discussing the regulation of medical specialists. This is particularly important at this time since medical leaders are practically unanimous in their opinion that something should be done to remedy certain evils existing in specialism as practiced today. While there is a unanimity of opinion that a problem exists there appears to be no agreement of thought as to the proper methods for the correction of the apparent irregularities.

Many educators believe that the most satisfactory solution of the problem of controlling medical specialists is that persons who wish to declare themselves as specialists be required to satisfactorily complete certain postgraduate medical education and

then be required to take a special licensing examination. Others believe that the problem can be satisfactorily met by the membership requirements of academies and societies devoted to the particular specialty, while the third group headed by Dr. Harold L. Rypins, who will preside at this symposium, believes that the solution of the problem lies entirely in a greater emphasis on systematic postgraduate instruction and that the system of licensure for specialists by the State Examining Board would be undesirable and impractical.

We shall watch with interest the deliberation of the congress of this perplexing problem.

On Tuesday morning the American Conference on Hospital Service will discuss the care of the veteran. The purpose of this program is to present a general discussion of some of the problems which have grown out of the present plan of the United States Government for the hospitalization of veterans. It is believed that such a full and free discussion by representatives of all groups of the congress will be of advantage to the veterans and the public at large. It is estimated that if the present plan of the government for the hospitalization of veterans is carried through to completion, the construction program alone will involve an expenditure of \$360,000,000 while the cost in maintenance when the program is completed would amount to \$200,000,000 per year. This conference should prove one of the most interesting of the congress.

ANNUAL SESSION OF AMERICAN COLLEGE OF PHYSICIANS

The Sixteenth Annual Clinical Session of the American College of Physicians will be held in San Francisco, California, April 4-8, 1932. The headquarters will be the Palace Hotel, in which the general scientific sessions, registration, and exhibits will be held. Clinics will be conducted in various hospitals and institutions in San Francisco and nearby communities.

Dr. S. Marx White, Minneapolis, president, has in charge the selection of speakers and subjects on the general program, while Dr. William J. Kerr, San Francisco, professor of medicine at the University of California Medical School, is the general chairman of the session, and is responsible for all local arrangements, in addition to the arrangement of programs and demonstrations. Following the San Francisco session a postconvention tour will be conducted through Yosemite Valley, Southern California (with two days in Los Angeles), and the Grand Canyon of Arizona.

APPOINTED COMMANDER OF NAVY MEDICAL SCHOOL

Captain William H. Bell, Medical Corps, U. S. Navy, has recently been appointed commander of the Navy Medical School, at Washington, D. C., relieving Capt. Chase S. Butler, who was ordered to the command of the Naval Hospital at New York.

SPEAKERS' BUREAU ACTIVITIES

NINETEEN HUNDRED THIRTY-TWO

Through the pages of the JOURNAL, the Speakers Bureau wishes to offer to the newly elected county medical society officers and to remind re-elected officers that the services of the Bureau are at your disposal. It is hoped that each county secretary, in formulating his plans for the year, will call freely upon the state medical office for help in connection with monthly programs, post graduate courses, etc. It is the aim of the Bureau to reach every county in the state—but we can help only if we are called upon.

In 1931 the Bureau had occasion to send speakers directly to 56 of the 97 county medical societies and reached other counties by sending speakers to such joint medical meetings as the Austin Flint-Cedar Valley Society and the Sioux Valley Medical meeting. We should like to be able to record at the end of 1932 that we have sent speakers to every county medical society in Iowa. Such a record will not only mean that the Bureau is proving of inestimable value to every section of the state, but it will also mean the widest possible dissemination of the latest facts and knowledge about medicine. When an exceptionally good paper or program is presented in any society meeting, the secretary should send in this information so that the Bureau may offer this program to other societies. Each county certainly has enough talent within it to organize at least one "team" for such purposes.

The Speakers Bureau of the Illinois State Medical Society has been in operation for ten years and has one of the most extensive educational programs of any state society in the United States. In 1931 they sent a total of 116 speakers to county society meetings. For the first year of operation of the Speakers Bureau of the Iowa State Medical Society, the total of 183 speakers sent to county medical society meetings offers a favorable comparison. Following are the figures which represent the number of these speakers sent out month by month in 1931: January—12; February—13; March—10; April—23; May—15; June—25; July—19; August—9; September—21; October—24; November—6; December—6. For the first month of 1932 a total of 29 speakers was furnished through the Bureau for scientific meetings—two and a half times as many as for the first month in 1931.

As yet the number of speakers sent out to lay meetings is relatively small. Since these speakers are sent to lay organizations at no expense to the group, no organization should be prevented from having the best of speakers on its health programs. Every member of the State Medical Society can help amplify our educational program by reminding the lay organizations in his community that this service is at their command. Lay health groups need intelligent medical direction; it is our duty to supply this leadership.

DISTRICT MEETINGS

A new type of medical meeting in Iowa was held in Garner on Thursday, January 28, 1932, when, at the call of the Councilor, L. R. Woodward, M.D., the Second District Medical Society convened.

One of the primary reasons for the redistricting of the state was to provide more compact districts which would make such meetings possible. These district meetings can serve two excellent purposes: first, the dissemination of information about state and local society business and economic matters; and second, high class scientific programs or post graduate courses may be organized through the Bureau for these district meetings.

The meeting at Garner was both a scientific and business meeting. It began at 4:00 p. m. with a clinic conducted by Walter C. Alvarez, M.D., of the Mayo Clinic, Rochester, on Nervous Disorders of the Stomach. After the clinic, the members and their wives participated in a banquet, during which time modifications of the Perkins-Haskell Klaus Law, changes in the constitution and by-laws of the State Society, and district organization matters were discussed. Following the business discussion, an evening scientific program was presented by Dr. Alvarez, on Nervous Disorders of the Stomach, and by R. D. Bernard, M.D., of Clarion, and E. C. Kepler, M.D., of Allison, on related topics. During the afternoon, the women's auxiliaries of the various counties represented were addressed by the state president, Mrs. Channing G. Smith.

RADIO ACTIVITY

Seven of the series of twelve radio talks, prepared by members of the State Medical Society, and sponsored by the Bureau, have been presented over stations WOI and WSUI. When these talks began, they were limited to a period of twelve weeks, but the interest in and response to the talks have been such that the radio stations have extended this period indefinitely.

Requests for copies of these talks indicate that they are being heard over a wide area—Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Missouri, Kansas, Wisconsin, Illinois and Canada.

As is the custom in many other states, the name of the doctor who prepared the talk is given as representing the State Medical Society. No local address is given for the doctor, but the announcement of his name seems to create more confidence and interest in his message on the part of the public.

All talks are carefully edited and approved by a special committee before they are broadcast so that they will truly represent the viewpoint of the State Medical Society.

THE WOMAN'S AUXILIARY

Editor's Note: Because of the inspirational note in, and informative character of, this message of the national president of the Auxiliary, we take pleasure in reproducing the message in full for our physician readers as well as their wives, the Auxiliary members.

Dear Auxiliary Members:

As we cross the threshold of a new year shall we, like other businesses, pause and take stock of ourselves to see where we have arrived in relation to the goal which we set for ourselves at our annual meetings?

Is there yet a county or a state auxiliary that is not working under the direction of an advisory council or counselor of doctors appointed by its medical society? A questionnaire sent last summer to our thirty-seven constituent state units to ascertain if they had advisory councils appointed by their medical associations brought replies from thirty and revealed that twenty-eight of those did have an advisory council. One of our goals for this year is an advisory council or counselor for each of our county and state auxiliaries. Where does your own auxiliary stand with relation to this goal? It is hoped that each state president reporting at New Orleans will be able to say that not only her state auxiliary but that each of its constituent county units has an advisory council or counselor.

Have you as a county or state group set a goal for membership? Has your auxiliary some sort of membership file by which you have kept a complete record of members from the beginning of your organization and are you retaining as members all those who have ever belonged? If not, could you not begin this first month in the new year to re-enlist them? Our national files contain many cards of members which we have had to class as "delinquents" because we have failed to receive dues or reports for them. Some of these have moved to other states, others have passed into the Great Beyond, still others have just failed to pay dues. Could not each organized county that has not already done so yet this year make an effort to re-enlist every eligible woman who has ever been a member, make a card file of its membership and report to the state office the names of those who have moved to other localities and to a chairman, which each state president is being asked to appoint for that purpose, the names of those who have passed on?

Last year Mrs. Hunsberger did much work to get our national membership file into order. The adoption of the present plan of treasurers' receipt blanks, now universally used by the auxiliaries, I think, is helping to perfect our files, but until every county and state auxiliary adopts the above suggested plan and reports on all the names ever sent in by them to the national office as members our files will be cluttered by cards which we must continue to class as "delinquents".

It seems to me that each county administration should feel that it had failed somehow in its duty if it did not make a sincere, persistent and tactful effort to hold in membership at least all those com-

mitted into its care by the former administration and unless its membership is already one hundred per cent of the wives of doctors belonging to the county medical society, it should attempt to make a definite, even though slight, gain.

The president of an auxiliary in one of the sparsely settled western states, where great distances and mountainous country make frequent meetings impossible, wrote that she had received much inspirational material from the various national chairmen this year, but that as yet, her auxiliary is only a social organization, whose primary purpose is to stimulate its members to attend annual meetings so that the attendance of the doctors themselves may be increased. This is a laudable goal. This auxiliary is already a "reserve force" for its medical society. When the doctors in that state medical society find out how those in the neighboring state societies are using their auxiliaries to promote understanding between the medical profession and the public, perhaps they, too, may desire to use their "reserve force" for further service, and the auxiliary in the meantime may be reviewing the work of other auxiliaries as reported in the state journals, the bulletin, the minutes and reports of the convention, and preparing itself for service when called upon.

Some of the newly organized auxiliaries are attempting nothing more than to bring about unity and solidarity within the profession by means of social contacts between the families of doctors. My observations on my visits to auxiliaries during this year lead me to believe that this function of the auxiliary should not be underestimated. The medical societies are apparently, more and more, recognizing the forces both within and without the profession that are working counter to the best interests of the profession and the public and are feeling the need of a *unifying* force such as an auxiliary may be when given sufficient encouragement and cooperation, and guidance by its medical society.

Recently an outstanding doctor in a county society which has no auxiliary, objected to the organization of one because he said the auxiliary is merely duplicating the work of other women's organizations. He gave an example of the various types of philanthropic work done by our units. This doctor had lost sight of two important factors in connection with the philanthropic projects of most of the auxiliaries. First, the philanthropic work done by the auxiliary usually is related closely to the work of the medical profession, for example: participation in Christmas seal sales of the tuberculosis societies; various types of work for hospitals, sanatoriums and preventorium; scholarship loan funds for medical students and students of nursing; contributions to the Medical Benevolence Fund by the Pennsylvania auxiliary; contributions to memorials established or

approved by medical societies. Because of the humanitarian and almost universal appeal to women of philanthropic work it will serve as a bond to hold them together while they establish unity and good fellowship within their group and while some to whom the educational and legislative programs make a strong appeal work under the guidance of their advisors on these programs within their own and other women's groups. Has your auxiliary a philanthropic goal for this year? Might it increase interest if you had such a goal?

The growing interest in the educational and public relations programs of the auxiliaries this year has been most gratifying. That many state medical societies have prepared educational programs for their auxiliaries and have endorsed the national auxiliary study envelopes for use in developing these programs is satisfying. In an increasing number of county auxiliaries a few women are being discovered who are vitally interested in the educational programs and who are a real force in interpreting the ideals and work of the medical profession to other women's groups in which they work by influencing these groups in the choice of approved literature and speakers to be used on their health programs. One of our goals this year is to discover such women, to urge them to represent our groups in other women's organizations by accepting positions of leadership therein, and to back them up by our loyal support. Are there such women in your group working, or capable of working under supervision of your advisory council in other women's organizations?

The state auxiliaries have made much progress this year in securing chairmen corresponding to the national chairmen. Our organization cannot function properly until county auxiliaries also have such chairmen who will receive program suggestions and materials from the state chairmen and who will report to the state chairmen on the progress of the county work. The function of the national auxiliary is to stimulate interest in types of approved work possible to be done and to serve as a clearing house for information on the kinds of work being done successfully by the various auxiliaries. It is obvious that little interest can be stimulated if there are not county and state chairmen corresponding to the national. How near to this goal is your auxiliary?

During the year between annual meetings, our Press and Publicity Committee reporting to the state journals and through the Bulletin of the A. M. A. is our clearing house for information and news. Has your state contributed its share of news to the state and national chairmen? Our national press and publicity chairman has been very diligent in collecting news and prompt in reporting, but many of our state chairman have never reported to her.

Where do you stand with relation to your Hygeia goal? We have repeatedly said that auxiliaries are organized to carry on those projects advised or approved by the medical associations. The House of Delegates of the American Medical Association in

the convention at Philadelphia last spring asked that we "recognize as one of our chief activities the promotion and distribution of this publication through parent-teacher associations, boards of education and similar bodies interested in education".

Do all of us realize that the American Medical Association is publishing Hygeia for the laymen, to meet his insistent demand for information concerning the functions and care of the human body, and that if this demand is not satisfied by authentic information that he is more likely than not "to go floundering away from scientific medicine"? If any of you are doubtful as to the helpfulness of Hygeia for teachers, mothers, nurses or doctors write to Mrs. Rogers N. Herbert, 1509 Stratton Avenue, Nashville, Tennessee, for a folder of "Hygeia Talks", which will probably convince you. If you are not a reader of Hygeia write, "The Circulation Manager," 535 North Dearborn street, Chicago, Illinois, for a sample copy, read it and let it convince you of its value.

No woman who is promoting the distribution of Hygeia through schools or homes or other educational groups should consider herself a magazine solicitor, but instead she should feel that she is an important factor in a health education project devised and promoted by the American Medical Association for the good of both the profession and the public.

A most interesting and inspiring development in auxiliary work that was revealed by some of the states reporting at the mid-year board meeting in Chicago is that several of the state auxiliaries now have a portion of the time of an assistant executive secretary appointed by their respective medical societies. Minnesota, Illinois and Wisconsin reported such cooperation. Is that kind of relationship between a state medical association and its auxiliary not a goal for which to hope!

And now as I write comes through the mail the fulfillment of one of the Kentucky auxiliary goals set at their annual meeting at Lexington in September which I attended—the first issue of their new "Quarterly," the first bulletin, I believe, to be undertaken by a state auxiliary. Congratulations, Kentucky!

The national auxiliary does not presume to dictate, it desires only to collect and exchange plans to advise and to stimulate state presidents and their chairmen. The annual conventions and mid-year board meetings are our greatest factors in stimulating interest. It is in these meetings that the values of the auxiliary become apparent; it is here where by reports, by conferences and discussions, we measure our progress, evaluate our methods and discover our mistakes; it is here that we discover our strength and our weakness, it is here that we set our goals.

We believe that the national mid-year board meetings and conventions are so important in the life of the auxiliary that every board member should consider it an obligation to attend when possible. We are suggesting that each state auxiliary set this new goal for itself at its next annual meeting if possible,

that it provide sufficient means to insure its state president's attendance at the mid-year board meeting in Chicago, and at the annual convention in the spring. We believe that every state chairman should make an honest effort to attend the national convention.

Mrs. Joseph Hume of New Orleans is the chairman of the next convention which is to be held next May 9-13 in that interesting old city of the south, New Orleans. Our own president-elect, Mrs. Walter Jackson Freeman, who so skillfully guided the con-

vention in Philadelphia, is also a member of the New Orleans convention committee.

There we shall find both pleasure and inspiration. May I hope to meet you there, one and all. May we have the satisfaction of reporting that we have reached all goals set for the current year. There are yet three more working months in which to accomplish them.

And won't you all be considering the goals we should set for next year?

Faithfully yours,
(Mrs. Arthur B.) Anna F. McGlothlan.

SOCIETY PROCEEDINGS

Black Hawk County Annual Meeting

Dr. J. G. McAlvin, of Waterloo, was elected president of the Black Hawk County Medical Society, at the annual business meeting of that organization, held January 13. Other officers are Dr. F. R. Cutler, of Cedar Falls, vice president; Dr. Eugene Smith, of Waterloo, secretary; and Dr. A. A. Hoffmann also of Waterloo, treasurer. Dr. Thomas F. Thornton and Dr. T. U. McManus, both of Waterloo, were elected delegate and alternate delegate.

Calhoun County

The Calhoun County Medical Society had the pleasure of hearing a practical talk on Office Surgery, by McMicken Hanchett, M.D., of Council Bluffs, and an equally practical one on Bovine Tuberculosis by L. E. Eslick, M.D., of Rockwell City. Present by invitation and discussing the latter paper was Claire Treman, D.V.S., Rockwell City. The usual fellowship dinner was held, with four visitors from surrounding counties. Acknowledgment of the gifts presented them by the society at the December meeting, in token of fifty years practice at Lohrville, was made by Daniel J. Townsend, M.D., and John W. Craig, M.D.

P. W. Van Metre, M.D., secretary.

Carroll County

Thursday, January 7, the Carroll County Medical Society met for a dinner meeting in Carroll, and the following program was presented: Diagnosis and Treatment of Parasitic Diseases of the Intestinal Tract, Aldis A. Johnson, M.D., of Council Bluffs; and Mistakes in Diagnosis, John C. Parsons, M.D., of Creston. Twenty-one doctors were present, which was a very good attendance, considering the condition of the weather. The program was highly instructive and was one of the best, if not the best, meeting in the past twelve months.

W. A. Anneberg, M.D., Secretary.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, January 19, at the Eadmar Hotel. After a six-thirty dinner, a brief business

meeting was conducted by President C. W. Hubbard and the resolutions passed by the Webster County Medical Society endorsing the principles and the activities of the Iowa State Medical Society, were read. This society endorsed these resolutions and moved that the state society be notified of such action. Following the business meeting, W. W. Bowen, M.D., of Fort Dodge, presented his talk on Colles Fracture, which was very interesting both from a scientific and historical viewpoint.

T. E. Davidson, M.D., Secretary.

Dallas-Guthrie Society

The Dallas-Guthrie Medical Society met in Adel, Thursday, January 21. The program opened with an address by the newly elected president, Dr. P. B. Glew of Dallas Center. C. E. Mershon, M.D., of Adel, read a paper on More About Cancer, and F. W. Fordyce, M.D., of Des Moines, addressed the group on The Acute Abdomen.

Decatur County Annual Meeting

At the annual meeting of the Decatur County Medical Society held in Leon, Wednesday, December 30, the following officers for 1932 were elected: Dr. J. S. Coontz of Garden Grove, president; Dr. G. P. Reed of Davis City, vice president; Dr. Fred A. Bowman of Leon, secretary and treasurer; Dr. John W. Wailes of Davis City, delegate; and Dr. M. W. Rogers of Leon, alternate delegate.

Des Moines County

John T. Hanna, M.D., and George H. Steinle, M.D., both of Burlington, were the speakers at the regular meeting of the Des Moines County Medical Society, held in Burlington, Tuesday, January 12. The doctors presented illustrated lectures on drop-kidney.

Franklin County Annual Meeting

The Franklin County Medical Society held its annual meeting recently in Hampton, and elected the following officers: Dr. E. D. Allen, president; Dr. W. R. Arthur, vice president; Dr. W. J. Aagesen,

secretary and treasurer; Dr. L. E. Haecker, delegate, and Dr. H. H. Johnston, alternate delegate.

Fremont County Annual Meeting

The Fremont County Medical Society met Wednesday, December 30, at the Hamburg Hospital. A. V. Hennessy, M.D., of Council Bluffs, was present and addressed the society on the work of the Iowa State Medical Society and some of the economic problems confronting the doctors today. Officers elected at the annual business meeting are: Dr. L. A. Baldwin of Riverton, president; Dr. Harold P. Cole of Thurman, vice president; Dr. A. E. Wanamaker of Hamburg, secretary and treasurer; Dr. B. B. Miller of Tabor, delegate; and Dr. William Kerr of Randolph, alternate delegate.

Greene County Annual Meeting

William M. Young, M.D., of Jefferson, furnished the scientific program for the Greene County Medical Society when that organization met in Jefferson, Wednesday, January 20, for the annual meeting. Dr. Young spoke on X-Ray Diagnosis and X-Ray Treatment. The results of the election were: Dr. Ben C. Hamilton, Jr., president; Dr. J. M. Jackson, vice president; Dr. J. R. Black, secretary and treasurer; Dr. G. W. Franklin, delegate; and Dr. Hamilton, Jr., alternate delegate.

Hancock-Winnebago Society Annual Meeting

The Hancock-Winnebago Medical Society met in regular session, Friday, December 11, and held the annual election. Results were as follows: Dr. Aug. J. Peterson of Forest City, president; Dr. W. F. Missman of Klemme, secretary and treasurer; Dr. G. A. Bemis of Garner, delegate; and Dr. Peterson, alternate delegate. A resolution was adopted that this society is appreciative of the effective and productive work of the Iowa State Society officers in their efforts to uphold the high standards of the medical profession. The competent and prompt action of the officers of the state society, in regard to important problems that arise from time to time, has inspired keen interest in organized medicine.

W. F. Missman, M.D., Secretary.

Henry County

The regular meeting of the Henry County Medical Society was held Friday, January 15, in Mt. Pleasant at the Harlan Hotel. Two scientific papers were presented: Complications of Obstetrics, W. S. Les-senger, M.D., and Postnasal Sinus Infection in Children, S. W. Huston, M.D., both doctors being from Mt. Pleasant.

Jasper County Annual Meeting

Dr. F. L. Smith of Newton was elected president of the Jasper County Medical Society at the annual meeting of that organization held Tuesday, January 5, in the Hotel Maytag. Dr. S. E. Hinshaw of Newton was named vice president and Dr. L. E. Fellows of

Newton was chosen secretary and treasurer. Dr. Fellows was also elected delegate and Dr. Smith, the president, was named alternate delegate. Dr. Robert L. Parker, secretary of the state society, discussed the activities of that organization; and Vernon D. Blank, managing director, talked upon county contracts for care of the indigent sick.

Johnson County Annual Meeting

Newly installed officers of the Johnson County Medical Society include Dr. F. R. Peterson, president; Dr. W. F. Boiler, vice president; Dr. George C. Albright, secretary and treasurer; Dr. Albright and Dr. N. G. Alcock, delegates. The program for the installation meeting was presented by Glenn C. Blome, M.D., who talked on Tetanus, and William F. Mengert, M.D., who presented an illustrated lecture on Surgical Anesthesia.

Lee County Annual Meeting

Dr. Harold F. Noble of Fort Madison is the new president of the Lee County Medical Society, and Dr. L. C. Pumphrey of Keokuk the new vice president. Dr. William Rankin, also of Keokuk, was re-elected secretary and treasurer. Dr. B. J. Dierker of Fort Madison and Dr. Frank M. Fuller of Keokuk are the delegate and alternate delegate respectively.

Linn County

On January 14, the Linn County Medical Society was fortunate enough to have M. Edward Davis, M.D., of Chicago, address the group on Toxemias of Pregnancy. The lecture was supplemented by three reels of films taken at the DeLee Clinic in Chicago. Dr. Davis also showed a film on Perineal Laceration. As an added feature, F. W. Mulsow, M.D., of Cedar Rapids, gave a paper on The Pneumococcus and Its Serology.

T. F. Hersch, M.D., Secretary.

Marshall County

A. C. Conaway, M.D., of Marshalltown, furnished the scientific program for the regular monthly meeting of the Marshall County Medical Society, Tuesday, January 5. Dr. Conaway presented a case of Addison's disease which he had treated with cortin.

Osceola County Annual Meeting

The Osceola County Medical Society held its annual meeting Thursday, December 31, in Sibley. Officers elected are: Dr. L. H. Heetland of Sibley, president; Dr. H. B. Paulsen of Ocheyedan, vice president; Dr. E. P. Farnum of Sibley, secretary and treasurer; Dr. F. S. Hough of Sibley, delegate; and Dr. F. P. Reinsch of Ashton, alternate delegate.

Palo Alto County Annual Meeting

At the annual meeting of the Palo Alto County Medical Society, held in Emmetsburg, Monday, January 18, the following officers were elected: Dr. J. P. McManus of Graettinger, president; Dr. Peter

Fransco of Ruthven, vice president; and Dr. H. L. Brereton of Emmetsburg, secretary and treasurer.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Hotel Fort Des Moines, Tuesday evening, January 26. Sixty-five members were present to hear the program presented by members from Linn County Medical Society. The program was arranged by the Speakers Bureau of the State Society. Carl R. Gillies, M.D., of Cedar Rapids gave an illustrated lecture on Charcot Joint. The paper was discussed by Drs. Douglas N. Gibson, Thomas A. Burcham, Daniel F. Crowley, and H. B. Henry. The second paper was read by B. F. Wolverton, M.D., also of Cedar Rapids. His subject was Subacute Bacterial Endocarditis, and this paper was discussed by Drs. Walter L. Bierring and C. B. Luginbuhl. J. T. Grayston, M.D., of Marion, concluded the scientific program with a paper on Acute Mechanical Intestinal Obstruction, which was discussed by Drs. O. J. Fay, R. A. Weston and Frank W. Fordyce. The team was complimented upon the excellent arrangement of the papers, the systematic review of the subjects, and the opinions expressed. The program was followed by light refreshments and a social evening of cards and conversation.

L. K. Meredith, M.D., Secretary.

Sac County Annual Meeting

The Sac County Medical Society met Tuesday, December 29, and elected the following officers to serve during 1932: Dr. F. L. Blair of Lytton, president; Dr. J. R. Dewey of Schaller, secretary and treasurer; Dr. E. E. Speaker of Lake View, delegate; and Dr. James McAllister of Odebolt, alternate delegate.

J. R. Dewey, M.D., Secretary.

Scott County

The regular monthly meeting of the Scott County Medical Society was held Tuesday, January 5, at the Chamber of Commerce in Davenport. Harry Rolnick, M.D., of Chicago, was the speaker of the evening, taking as his subject, Pelvic Infections in the Male. Dr. Rolnick illustrated his lecture with lantern slides.

Tama County

Fourteen members of the Tama County Medical Society met in Traer, Friday, January 15, and listened to a scientific program furnished by two Waterloo physicians. The first paper was The Aid Offered by X-Ray Diagnosis, by Otis W. Britt, M.D., and the second, Diagnostic Points in Urology, by F. H. Entz, M.D.

Taylor County Annual Meeting

Officers to serve the Taylor County Medical Society during 1932 were elected Monday, January 11, and are: Dr. L. T. Reed of Gravity, president; Dr. J. T. Maloy of Bedford, vice president; Dr. G. W. Rimel of Bedford, secretary and treasurer; Dr. P. J.

Gustin of Bedford, delegate; and Dr. J. T. Maloy of Bedford, alternate delegate.

Union County Annual Meeting

Dr. Carl Sampson of Creston was named president of the Union County Medical Society at the annual meeting held Wednesday, December 23. Other officers are: Dr. Donald R. Raffington, vice president; Dr. H. A. Childs, secretary and treasurer; Dr. J. C. Parsons, delegate; and Dr. Sampson, alternate delegate.

Washington County

The Washington County Medical Society held its January meeting in the G. A. R. rooms at the Court House, Tuesday, January 5. Howard L. Beye, M.D., head of the surgical department of the State University of Iowa, presented a clinical demonstration of Abdominal Conditions, with x-ray pictures and case reports.

W. S. Kyle, M.D., Secretary.

Wayne County Annual Meeting

At a recent meeting of the Wayne County Medical Society, the officers of the society, for the past year, with the exception of the delegate, were re-elected for 1932. Dr. B. B. Parker of Allerton is president; Dr. J. H. McCall, also of Allerton, is secretary and treasurer. The new delegate is Dr. B. S. Walker of Corydon.

INTERESTING NEWS

In Brief

At the recent meeting of the American Association for the Advancement of Science in New Orleans, three matters of medical moment were considered. Dr. Frederick Ebersson, of the University of California Medical School, announced the isolation and growth of an organism which he believes to be the cause of infantile paralysis. Dr. Donald C. A. Butts and associates announced the control of cell growth, including cancer growth, within the body by a hormone secreted by the spleen. Dr. M. L. Townsend, of Washington, D. C., maintained that physical defects frequently of a correctable nature were present in a large per cent of all mental defectives. He cited dementia praecox cured by the removal of an infected tooth and tonsils.

The Province of Ontario, Canada, maintains a physician, an official of the Department of Health, whose duties are to provide diagnosis treatment by wireless to patients scattered through the desolate areas of the far north. His reports are transmitted to him from the meteorological radio stations, Royal Mounted Police depots, fur trading posts, and mining camps and his instructions for the care or treatment of the sick are in turn transmitted to these stations.

Barred from the air by the Federal Radio Commission, N. G. Baker of Muscatine has petitioned the

Senate "to investigate the radio commission with reference to the operation of station KTNT and the matter of free speech and censorship, especially the subject of cancer cure." It is predicted that the petition will never emerge from the committee on interstate commerce to which it has been referred.

Included in the will of Dr. Francis X. Dercum, neurologist, of Philadelphia, is a request that his private case records be destroyed. This request has, no doubt, been prompted in order to maintain the highest ideals of medical ethics and to prevent records of prominent public characters such as the late Woodrow Wilson being reviewed by the general public.

Dr. Carl E. Jordan, on leave of absence from the University of Iowa, served the Des Moines County Health Unit as director during the past year. Effective February 1st, Dr. Jordan will discontinue this association and return to his teaching position at the University of Iowa in the department of hygiene and preventive medicine.

Dr. Horace Whiteacre, of Tacoma, president of the Washington State Medical Association, has openly advocated newspaper advertising for physicians and surgeons before the Spokane Medical Society. Dr. Whiteacre believes that this is the only means of effectively combating inroads of other schools of practitioners into the surgical and medical fields.

News dispatches from Berlin state that Dr. J. H. Fuchs, hematologist, has devised a new method of diagnosing cancer based upon the examination of small quantities of blood. Since this is the second report of a blood test for the detection of cancer, it is apparent that this method of investigation is receiving much attention at this time.

Two hundred six Iowa educators, public officials, physicians and social workers have been requested to conduct an extensive study of the education and training of children in order that Iowa may make its contribution of data to the Iowa White House Conference on Child Health and Protection. The conference will convene in Des Moines April 14 and 15.

Dr. Louis I. Dublin, statistician of the Metropolitan Life Insurance Company, estimates that measured in "cold money terms" alone, six billion dollars' worth of lives are lost every year from preventable illness. In view of the fact that three billion dollars are at this time invested in hospitals in the United States, it would seem that this figure is certainly excessive.

The Boone County Medical Society has decided to open and operate a free dispensary at the Boone County hospital for the aid of those who, because of being out of work, have no funds with which to

obtain medical aid as well as for the indigent poor cases being cared for by the county.

It has been announced that Norman Baker, of Muscatine, is one of the founders and sponsors for the new farm organization designated as the United Farm Federation of America. It is assumed that this organization has been created to protest Iowa's program of bovine tuberculin tests.

The Community Hospital at Grinnell has just published its annual statement indicating 604 patients treated during the year with a mortality rate of 2.9 per cent. Three hundred two persons availed themselves of the hospital insurance plan with a profit to the hospital of \$800 for 1931.

Upon the observation that the death rate from cancer per 100,000 population in the north of France mounts to 141 and that in the southern departments the rate drops to 26, the French Anti-Cancer league advocates the moderate drinking of wine as a cancer preventive.

According to Dr. Arthur E. Steindler, orthopedist at the University of Iowa, posture becomes a matter of habit and incorrect posture is and should be treated as a deformity. Postural defects may be recognized early by extensive inspection and carefully supervised physical training.

Announcement has been made of the dissolution of the Muscatine Clinic effective January 1, 1932. Doctors associated in the clinic were: Dr. E. K. Tyler, Dr. T. F. Beveridge, Dr. L. C. Howe, Dr. C. P. Phillips and Dr. W. W. Daut.

Convicted of using the advertising columns of local newspapers to announce the low rates of their Wicker Park Health center, six Chicago physicians were recently expelled from the Chicago Medical Society.

As a result of the recent survey of the hospitals in the United States conducted by the American College of Surgeons, 85 per cent of the 3,319 hospitals have been placed on the approved list.

Recent investigation indicates that the cancer mortality for 1929 had reached a new high level of 96.1 per 100,000 population. This represents an increase of over 52 per cent in twenty-nine years.

In connection with the hospital at Hamburg, Iowa, a new organization designated as the Hamburg Clinical Society has been organized for the purpose of scientific advancement.

A service bureau for physicians has recently been established in Oskaloosa. The plan adopted there is similar in operation to that in Des Moines and Iowa City.

At a recent national convention of women physicians held in Iowa City under the sponsorship of the Nu Sigma Phi, national medical sorority, forty women doctors attended.

The Hamburg Hospital at Hamburg, Iowa, has recently added x-ray equipment of the very latest type together with equipment for electrocautery.

PERSONAL MENTION

Dr. Paul A. White of Davenport was elected president of the Tri-City Council of the University of Chicago Alumni Association, at a meeting held in Rock Island, Illinois, Friday, January 8.

Dr. J. Fred Throckmorton, for the past six years police surgeon in Detroit, has joined his father, Dr. R. Fred Throckmorton, in Des Moines, for the practice of medicine. They have their offices in the new Des Moines Building.

Dr. Willard P. Marble, who for the past two years has been associated with his father, Dr. P. L. Marble, in Liscomb, has received notice that he has been appointed to a three years' fellowship in surgery at the Mayo Clinic. Dr. and Mrs. Marble have already left for Rochester where he will take up his new duties.

Drs. L. A. Prewitt and Harold A. Spilman, presented talks respectively on "Infantile Paralysis" and "The Modern Doctor," over the Ottumwa radio station, WIAS.

Dr. F. L. Suggett, formerly director of the health department in Boone county, Missouri, has been named director of the Des Moines County Health Unit, filling the position left vacant when Dr. Carl E. Jordan returned to the State University of Iowa.

Dr. Anton L. Fink is opening offices in Carroll for the practice of medicine, after having practiced eighteen years in Granville.

Dr. Julia Ford Hill has returned to Des Moines after a prolonged absence spent studying in the field of mental hygiene in children. The last five months were spent in a large child guidance clinic at Worcester, Massachusetts.

Dr. Ray Jackman, who has been associated with Dr. E. F. Beeh of Fort Dodge, has gone to Laurens to care for the practice of Dr. J. H. Hovendon until the latter recovers from a recent serious illness.

Dr. Isaac Sternhill, city physician of Council Bluffs, addressed the Council of Social Agencies, Monday, January 25, taking as his subject, "Medical Care of the Indigent."

Dr. John C. Creane, formerly of St. Louis, has lo-

cated in Centerville, taking over the offices and equipment of the late Dr. Charles T. Tillmont. Dr. Creane is a graduate of the St. Louis University Medical School.

Dr. Leone Scruby of Des Moines, sailed January 26 from New York on a tour of the West Indies, South America, Panama and Cuba.

Dr. K. A. Sporre, who for the past thirteen years has practiced medicine in Harris, is planning to locate in Rock Rapids. Dr. Sporre will take the place of Dr. G. H. Boetel, who with Mrs. Boetel is returning to Omaha, where they will make their future home.

MARRIAGES

The wedding of Miss Catherine Peck of Sioux Falls, South Dakota, and Dr. Robert C. Knott of Sioux City, took place Monday, January 18, in Sioux Falls, in the chapel at All Saints School. Dr. Knott and his bride will be at home in Sioux City after March 1, where the bridegroom has been practicing medicine for two years.

Thursday, January 14, Miss Lucille Murphy of Cedar Rapids, and Dr. Benjamin G. Broghammer, also of Cedar Rapids, were united in marriage. A wedding breakfast followed the ceremony, after which Dr. and Mrs. Broghammer left for a two weeks' trip. Dr. Broghammer is city physician for Cedar Rapids.

Dr. Joyce C. Schmidt, daughter of Dr. and Mrs. A. A. Schmidt of Postville, was married, Monday, December 29, to Mr. George W. Spurgeon of Galva, Iowa. After a short trip to Chicago, the young couple returned to Postville where the bride is engaged in the practice of medicine with her father.

DEATH NOTICES

Daly, William Thomas, of Cresco, died December 28, at the age of fifty-eight, as the result of heart trouble. He was graduated in 1899 from the Northwestern University Medical School and at the time of his death was a member of the Howard County Medical Society.

Macrae, Donald, of Council Bluffs, died January 11, at the age of sixty-one. Death was due to pneumonia. He was graduated in 1891 from the University of Michigan Medical School, and at the time of his death was a member of the Pottawattamie County Medical Society.

McCue, James Gettis, of Silver City, died January 7, at the age of sixty-three. Death was due to heart trouble. He was graduated in 1891 from the Louisville Medical College, Kentucky, and at the time of his death was a member of the Mills County Medical Society.

PROMINENT HOMEOPATH DIES

Dr. George Royal of Des Moines died at his home December 27, at the age of seventy-eight, of diabetes. Dr. Royal was outstanding in homeopathic circles for nearly half a century. He was a professor in the college of homeopathic medicine at the State University of Iowa, for thirty years, and dean of the college for eighteen years. Three of his textbooks have gained nation-wide notice: "The Homeopathic Therapy of Diseases of the Brain and Nerves," "Theory and Practices of Medicine," and "Materia Medica." From 1918 to 1924, Dr. Royal edited the Journal of the Iowa Homeopathic Society. Dr. Royal was also an honorary member of the British Homeopathic Medical Society.

COUNTY MEDICAL CONTRACTS NOW TOTAL NINETEEN

The completion of three new county medical society contracts for the care of the indigent sick brings to nineteen the total of such contracts in Iowa. The recently completed contracts are in Crawford, Monroe and Tama counties. In each of these counties the project has been in process of formulation for nearly three years and the successful consummation is a source of satisfaction to all concerned. In the smallest of these, Monroe county, the contract is for \$1,000 a year, in Tama county the sum is \$2,000, and the Crawford county contract is for \$2,500.

Reports already received indicate that the sixteen counties previously having contracts have renewed them for 1932, some with increases. The Muscatine county contract has been increased to \$3,600, and the Webster county contract has been increased from \$3,000 to \$3,615. The Scott county contract remains at \$15,000. Final reports have not been received from the remaining counties but preliminary indications are that renewal at previous figures have been effected in Black Hawk, Boone, Clinton, Hardin, Jefferson, Lee, Louisa, Mahaska, Marion, Marshall, Potawattamie, Washington, and Wright counties.

DR. ROHLF'S BIRTHDAY CLINIC

On Tuesday, January 5, the twenty-first of the Rohlfs Birthday Clinics was held in Waverly. Beginning at 7:00 A. M. the day was devoted to clinics, surgical, skin and medical. At 6:30, more than one hundred friends sat down to a banquet celebrating Dr. Rohlfs's sixty-fifth birthday. Despite the bad weather it was evident that the clinics, the evening program, and the fine fellowship which prevailed, equalled the high mark set by the former gatherings.

AGE AND SEX INCIDENCE OF INFLUENZA AND PNEUMONIA

The United States Public Health Service has recently completed a statistical study of the age and sex variation in cases of influenza and pneumonia. This study summarizes the age and sex variation in influenza and pneumonia morbidity and mortality during the 1928-29 and the 1918-19 epidemics. It is based on canvasses following each epidemic of families including nearly one hundred and fifty thousand

persons in about twelve localities in the United States. While there are some similarities in the 1928-29 and 1918-19 age curves, the differences are more striking than the similarities. The young adult peak in pneumonia incidence and in mortality in 1918-19 was absent in 1928-29. Pneumonia incidence and the death rate were both much higher in 1918-19 than in 1928-29 but the percentage of pneumonia cases that were fatal were not greatly different in the two epidemics. There was a very large difference in the percentage of cases complicated by pneumonia in the two epidemics; but once pneumonia existed, the chance of fatal outcome was nearly the same in both years. Statistical data of this kind give no clue as the reason for the striking difference in age incidence in the two epidemics, and any attempt at explanation would be only conjecture.

EMERGENCY DIETS

A folder on emergency food relief and child health has just been issued jointly by the U. S. Children's Bureau and the U. S. Bureau of Home Economics. It is especially designed to aid relief agencies and their workers in providing the food necessary to safeguard the health and growth of the children of the families in their charge, inasmuch as the food needs of the growing child present the most important of all the problems to be met in planning relief budgets.

Emphasis is laid upon the importance of the adequate diet, and upon the fact that if, temporarily, relief funds cannot be obtained that are sufficient to provide adequate diets, at least enough money must be allowed to provide the "irreducible amounts" of protective and other foods below which it is not safe ever to let the diet fall, even for short periods of time.

It lists the minimum weekly quantities of protective foods (milk, cod-liver oil, and vegetables), necessary for health and growth in families of three, five, and seven (with children), when diets are adequate. At the same time it lists what these same families must have to prevent serious damage when diets are at a lower level as so many are at present. This emergency diet will at least safeguard health for a limited period.

DR. EDWIN J. SIMON WINS PRIZE

Dr. Edwin J. Simon of Swanville, Minnesota, was awarded the 1931 prize of \$250.00 offered by the Minnesota Society of Internal Medicine. In the course of carrying on a general practice in a somewhat isolated community Dr. Simon, a graduate of the University of Minnesota in 1924, has produced a complete and scholarly monograph on primary carcinoma of the lung. This prize is offered annually to the practitioner of medicine in the state not a member of the society, who has made the most valuable contribution to medical knowledge.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. ARTHUR D. WOODS, State Center

DR. FRANK M. FULLER, Keokuk

DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

Three Interesting Generations of Iowa Practitioners

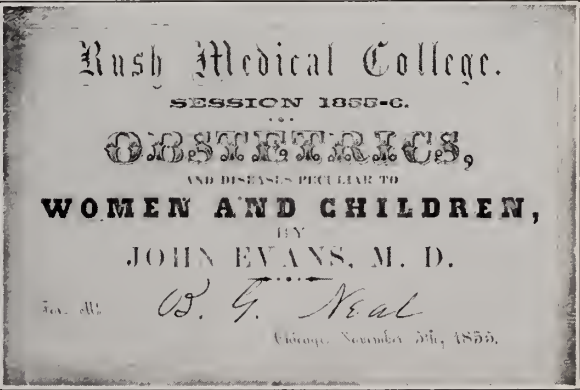
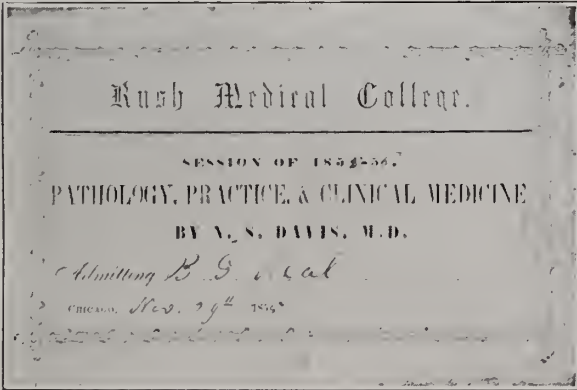
BENJAMIN G. NEAL, 1825-1898 (M.D. Rush 1856)

GEORGE P. NEAL, 1852-1930 (M.D. Iowa 1874)

EMMA JEWEL NEAL, 1878-(M.D. Keokuk 1902)

Benjamin G. Neal was born in Missouri, January 8, 1825, the son of Daniel and Margaret (Griffith) Neal. His father was a former slave holder in Virginia. Both his parents died before he was eight years of age. He learned the printer's trade at the office of the Clinton Republican, a Whig paper of Wilmington, Ohio. In 1849 he had acquired sufficient medical knowledge to enable him to practice medicine, and he located at Columbus City, Louisa County, Iowa, then referred to as "the West." The next year he was appointed postmaster. He continued to follow

the first Caesarean operation west of the Mississippi River. He was intimately associated with Dr. James M. Robertson, and it stated that when sickness was very prevalent, the needs of the afflicted patients of each in their great territory extending over Louisa, Washington, Johnson and Muscatine Counties, were served by alternating trips of the different routes, administering to each other's patients. He died at Fort Madison in 1898, at the age of 73 years, having completed nearly 50 years of pioneer practice in Iowa. George P. Neal was born at Russell Place, Law-



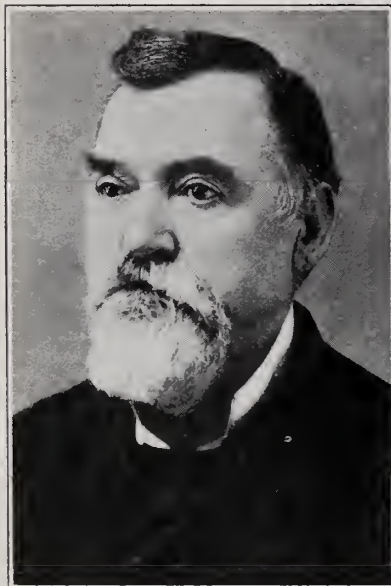
his vocation as printer in connection with the practice of medicine, and it is reported that he walked to Iowa City in 1850 to secure employment with the printer in setting type on the first Code of Iowa. In 1851 he returned to Ohio to practice in Ironton, remaining three years after which he went to Chicago to begin a two years' course at Rush Medical College from which he was graduated in 1856. Two of his admission cards at Rush Medical College for the session of 1855-56 are published herewith. He then returned to Columbus City to practice, where he remained until 1887 when he moved to Fort Madison. It is reported that Doctor Neal performed

rence County, Ohio, November 10, 1852. Early in life he came to Columbus Junction, Iowa, where his boyhood days were passed. He was educated at the State University of Iowa, and was graduated from the medical department, March 4, 1874. For sixteen years he practiced medicine with his father, Dr. Benjamin G. Neal. While located at Columbus Junction, Doctor Neal was editor of the Louisa County Times for two years, and was also postmaster under Cleveland's first administration. He moved to Fort Madison, January 1, 1890, and continued to practice there until his death July 12, 1930. He was physician to the City Board of Health for four years, and

from 1893 to 1905 was president of the Board of United States Pension Examiners. He was an able practitioner, taking an active interest in public affairs, and was the choice of the Democratic party in Fort Madison for state representative.

Emma Jewel Neal was born in Louisa County,

medicine, being an active member of the Linn County, Iowa State, and Iowa Women's Medical Societies. She has acted as treasurer of the Linn County Medical Society during the past five years. Doctor Neal is a staff member of Mercy and St. Luke's Hospitals of Cedar Rapids, having served as president of the



BENJAMIN G. NEAL, M.D.



GEORGE P. NEAL, M.D.



EMMA JEWEL NEAL, M.D.

June 29, 1878. She received her degree of Doctor of Medicine from the Keokuk Medical College and College of Physicians and Surgeons in 1902, and after a year of post graduate study located in Cedar Rapids, in March 1903, where she has practiced ever since. Doctor Neal has been greatly interested in organized

Mercy Hospital staff for one year. She has been an enthusiastic member of the Cedar Rapids Business and Professional Women's Club since its organization.

The three generations of Doctors Neal have thus far covered a period of practice in Iowa of eighty-three years, which is indeed an enviable record.

DONALD MACRAE, JR., M.D., F.A.C.S. 1870--1932

An Appreciation

Doctor Donald Macrae, Jr., died January 11, 1932, of pneumonia. In his death the Middle West has lost one of its best known citizens and surgeons. Council Bluffs particularly will miss the man whose forceful character has ever been for its best interests, and whose qualifications were an ornament to the medical profession, recognized so by a wide acquaintanceship throughout the country.

"Like father, like son," well applies to father and son Macrae. The senior Dr. Macrae, a graduate of Edinburgh University, was one of the best informed and all-around practitioners one might wish to know; was once mayor of Council Bluffs, and president of the Iowa State Medical Society. Those who had the benefit of his counsel, judgment and friendship, particularly in the formative periods of their medical career, as had the writer, were fortunate indeed.

Donald Macrae, Jr., was born in Council Bluffs, January 24, 1870. His preparatory education before

taking up the study of medicine at the University of Michigan from which he was graduated in 1891, was at Lake Forest Academy, Morgan Park Military Academy and at the State University of Iowa. In addition to frequent visits to clinics of our own country he made a clinical study abroad, visiting France, Switzerland, Austria, Germany and London. Realizing the advantage of personal contact with a teaching institution he became Professor of Anatomy, Omaha Medical College, 1893-1898; Professor of Clinical Surgery, University of Nebraska, College of Medicine, 1901-1912; Chief of Surgical Staff of the Jennie Edmundson Memorial Hospital, where the volume of work done was most unusual for a surgeon anywhere.

At the outbreak of the Spanish-American War he left for the Philippines as first lieutenant, and assistant surgeon of the Fifty-first Iowa volunteers. On his return he was much honored by his regiment because of his active interest in their welfare,

sharing with them the discomforts and dangers of their duties. He was given a gold sword by the citizens of Red Oak, an appreciation of his care of Company M of that city.

As a citizen he was twice elected mayor of Council Bluffs. No project of importance to the city was discussed without the active interest and advice of the doctor being sought; he was distinguished for his enthusiasm, honesty, and sound common sense.

As commanding officer of Mobile Hospital No. 1,



A. E. F., during the World War, Dr. Macrae's services were conspicuously valuable. Through the efficiency of his quartermaster's service this hospital was kept equipped to the best advantage. Red-tape was cut, and trucks, supplies, tents, barracks, and the necessities for efficient work were always available. How this was accomplished was a mystery to some other hospital commanders. At the Chateau Thierry drive ninety surgeons were almost constantly working; thirty-two operating tables were going most of the time. It is seemingly impossible but 490 cases were operated upon from 5 P.M. to 5 A.M., on one occasion; 37,500 cases were taken care of during the Chateau Thierry drive until the armistice.

Dr. Macrae possessed an absolutely fine judgment in the taking care of any kind of a surgical case. After the Chateau Thierry drive had begun, Macrae's accurate judgment of treating various types of wounds was recognized. At his suggestion the Chief Surgeon of the army with whom he was associated began issuing bulletins as to the simplest, safest method of treating various types of wounds. Special-

ization, which required too much time and service to the possible advantage of the few, was stopped, when hundreds needing urgent life-saving and rehabilitation attention were kept waiting. These bulletins were issued and posted at all army hospitals near the front line until the close of the war.

If the wounded soldiers were coming back from the front exhausted and suffering from shock, Dr. Macrae would immediately make an effort to be moved nearer to the front regardless of the fine hospital set-up that he might have. Frequently his organization was under shell fire by day and bombing by night. One member of his command said, "Although he was a 'hard-boiled' commanding officer and worked his men way beyond their limited endurance, he received absolute loyalty from them. He worked his men hard but he worked and 'played the game' just a little bit harder than they did." As a reward for his military services, Dr. Macrae was commissioned Colonel in the Medical Corps, U. S. Army, and was also decorated with the Croix de Guerre and distinguished service medals.

He was a member of Beta Theta Pi and Nu Sigma Nu fraternities; Western Surgical Association (past president); Medical Society of the Missouri Valley (past president); Council Bluffs Medical Society (past president); Pottawattamie County Medical Society; Iowa State Medical Society (past president); American Medical Association (member of Judicial Council since 1927; member House of Delegates, 1922-1931); Iowa Clinical Surgical Society; Fellow of the American College of Surgeons, and president of the Council Bluffs Clinic.

Professionally, "Don," as he was affectionately called by his friends, was really gifted in diagnostic ability and judgment of the desirability or necessity of a surgical procedure. As a technician and skillful operator the writer has never seen his superior and few equals; his field was a broad one; his emergency surgery of a wounded lung or intestinal pathology was equally of the best. Nothing seemed to disconcert him. He was as physically fearless a human being as is ever met with; kind and thoughtful of the welfare of others; a sympathetic, generous, dependable friend under all circumstances. At the recent meeting of the Western Surgical Association in Denver, December 4 and 5, there was no member whose paper or discussions received more consideration. His experience was unusual, few surgeons in any city in our country did more private operations daily than did Dr. Macrae, and his results were those of the best.

In appreciation of his record the funeral was a military one, carried out by the Iowa National Guard. The church was crowded to capacity, many friends coming from distances. All city and county offices, and all business houses were closed during the funeral; flags throughout the city were at half-mast. The body, enveloped in the American flag, was borne to the cemetery on a caisson drawn by six black horses.

More than one thousand telegrams and letters of

sympathy were received at the Macrae home. They came from all parts of the country, from the enlisted personnel; from the nurses; from many of the profession who knew the doctor at home and in France; from governors and army officers, among them those of general's rank. Wonderful editorials of appreciation appeared in newspapers throughout the country.

The writer, who had known Don since he was a medical student and had for many years been intimately associated with him, has not the words to express his feeling of loss. Don's life was a colorful life, a vivid life, a vital life; it radiated. To know him was to respect him, to enjoy him, to love him. To his family, the widow, son, daughter and grandchildren, the sympathy of the Iowa medical profession and that of the whole middle west is from the heart. We are proud of his memory.

John E. Summers, M.D., Omaha, Nebraska.

Resolutions

WHEREAS, it has pleased the great Creator to move from earth Dr. Donald Macrae, Jr., a member of the medical profession residing in Council Bluffs, Iowa, and

WHEREAS, the staff of St. Joseph's Hospital recognizing the fact that in his passing to the Great Beyond the medical profession has lost one of its skillful and able members, one in whom was combined not only the sympathetic and intellectual qualities that go to make up the true physician but also those courageous qualities that are only found in a first citizen and patriotic soldier of the land,

THEREFORE BE IT RESOLVED, that the staff of St. Joseph's Hospital of Sioux City, Iowa, convey to his bereaved family and relatives its deepest sympathy in their bereavement, and

BE IT FURTHER RESOLVED, that a copy of these resolutions be spread upon the minutes of this staff and published in the IOWA STATE MEDICAL JOURNAL, also a copy be sent to his bereaved family.

Staff of St. Joseph's Hospital, Sioux City, Iowa.

WILLIAM T. DALY, M.D., F.A.C.S.
1873—1931

An Appreciation

It is a mystery why the year 1931 could not have closed without throwing the cloud of sorrow over a happy Christmas community. On the morning of December 28, unheralded, unexpected, suddenly, the mantle of sorrow fell upon the home of W. T. Daly of this city. No one knew—only the hushed voices, "Doctor Daly is dead," a terrible shock to all.

The Howard County Medical Society, through its committee, hastens to express its sorrow over the death of one of its most valuable members, and to extend to the bereaved family its most sincere sympathy in their sorrow. Doctor Daly, faithful in attendance, quiet and unassuming, was always ready to give wise counsel for the benefit of the society. His presence in the meetings always brought good cheer. By vote of the society, a vacant chair has been reserved in memory of our departed member.



It is recommended by the committee that this tribute of regard for Doctor Daly from the Howard County Medical Society be recorded in the minutes, and that a copy be sent to his bereaved family, and to the Journal of the Iowa State Medical Society.

Committee: George Kessel, M.D.
George A. Plummer, M.D.
J. W. Jinderlee, M.D.

Dr. William Thomas Daly was born at Elkader, Iowa, in 1873. He received his degree of Doctor of Medicine from Northwestern University Medical School in 1899, and soon after graduation located in Cresco, Iowa, where he was a leading practitioner during all of his medical life.

At the outbreak of the World War he enlisted, was commissioned captain, and assigned to Fort Riley, Kansas, later transferred to Love Field, Dallas, Texas, to the 169th Aero Squadron, and was in active service overseas between February 11, 1918, and November 28, 1918. Upon his return he was placed in charge of the Debarkation Hospital in New York City until August 11, 1919, when he was discharged.

He was an active member of the Cresco Post of the American Legion from its organization. He was a member of the Howard County Medical Society, Iowa State Medical Society, the American Medical Association, and the American College of Surgeons.

Doctor Daly was married in 1905 to Miss Kate Carlisle Reed, who survives with one son, Thomas Reed Daly, a student at the University of Iowa. Doctor Daly was ill only one week, and did not give up his work until three days before his death on December 28, 1931.

W. L. B.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

***CUTANEOUS X-RAY AND RADIUM THERAPY**—By Henry H. Hazen, M.D., Professor of Dermatology, Georgetown University; Professor of Dermatology, Howard University. 166 pages with 28 illustrations. The C. V. Mosby Company, St. Louis, 1931. Price, \$3.00.

***GONORRHEA IN THE MALE AND FEMALE** (A Book for Practitioners)—by Percy S. Pelouze, M.D., Associate in Urology and Assistant Genito-Urinary Surgeon, University of Pennsylvania. Second Edition, revised. 440 pages with 92 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$5.50.

***MEDICAL CLINICS OF NORTH AMERICA**—September issue—Vol. xv, No. 2 (Philadelphia number—September, 1931.) Issued serially, one number every other month. 303 pages with 37 illustrations. Per Clinic Year, July, 1931, to

May, 1932. Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London, 1931.

***HUMAN ANATOMY**—By B. C. H. Harvey, M.D., Professor of Anatomy, University of Chicago. Published by American Medical Association, Chicago, 1931.

***GYNECOLOGY AND UROLOGY FOR NURSES**—By Samuel S. Rosenfeld, M.D., F.A.C.S. 230 pages, illustrated. William Wood & Company, New York, 1931. Price, \$2.00.

***THE NURSE'S MEDICAL LEXICON**—For the use of graduate and student nurses, of premedic and dental students, and of the general public, by Thomas Lathrop Stedman, A.M., M.D., New York. William Wood & Company.

***SURGICAL PATHOLOGY OF THE DISEASES OF BONES**—By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. 272 pages with 211 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1931.

*Review appears in this issue.

BOOK REVIEWS

CUTANEOUS X-RAY AND RADIUM THERAPY

By Henry H. Hazen, M.D., Professor of Dermatology, Georgetown University; Professor of Dermatology, Howard University. 166 pages with 28 illustrations. The C. V. Mosby Company, St. Louis, 1931. Price, \$3.00.

This is a short and practical work of especial interest to the dermatologist. Essentially one-half of the text describes the physics and physiologic effects of the x-rays, while the remaining part describes the classes of dermatologic cases suitable for irradiation, together with the technic used. T. A. B.

GONORRHEA IN THE MALE AND FEMALE

(A Book for Practitioners)—By Percy S. Pelouze, M.D., Associate in Urology and Assistant Genito-Urinary Surgeon, University of Pennsylvania. Second Edition, revised. 440 pages with 92 illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$5.50.

The author is to be commended for the masterly manner in which he presents the subject matter to the practitioner for whom the volume is intended. A vivid description of the gonorrheal infection in both male and female is accurately portrayed—one of the most fearful scourges to mankind. As the author states, the volume is presented primarily to aid in the prevention and treatment of complications when the gonococcus has established itself as a glandular infection in the genito-urinary tract. It is admitted that there is no germicide for local use as yet which will eradicate the gonococcus and probably this is not to be. Instead, as this volume points out, the successful attack in the future will probably be biochemical in nature.

Without mincing words, the author in his characteristic manner states that gonorrhea is the worst treated of all diseases. He says that this is due to

general lack of knowledge of the pathologic background of the gonorrheal infection. On page 66 a histologic section drawing is portrayed. The picture shows the organisms far below the basement membrane deep in the submucosa, completely out of reach of any bactericides that one might employ.

The author gives three major reasons for failure to cure: (1) Ingestion of alcohol, (2) Sexual excitement, (3) Improper treatment. Any one of these can and often does precipitate a mild and easily curable infection into one of chronicity and long standing disability and in some instances permanent damage to the body mechanism.

One chapter of the volume is devoted to presentation of fifty-three (53) actual case reports. Each one of these illustrates a different type of complication arising from the gonorrheal infection, the cause therefor and the steps taken by the author in their correction afterward. Another chapter is given to this affliction in the female. The author consults well recognized authorities as Dickinson, Curtis, Norris and Graves for their views and suggestions on the clinical data given which is brief and to the point.

No general practitioner who sees gonorrhea in his practice can afford to be without this book. The latest views on the subject are presented clearly and forcibly by one of our best recognized authorities.

W. R. H.

MEDICAL CLINICS OF NORTH AMERICA

September issue, Vol. xv, No. 2 (Philadelphia number, September, 1931.) Issued serially, one number every other month. 303 pages with 37 illustrations. Per clinic year, July, 1931, to May, 1932. Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London, 1931.

This Philadelphia issue of the well-known Medical Clinics of North America contains the usual number

of highly interesting clinics. It is difficult to select individual clinics from this volume for special mention since the entire group is so uniformly well presented and highly interesting. The general practitioner will, no doubt, be especially interested in the cardiac cases presented. The clinic by Drs. Talley and Easby discusses three cases of patent ductus arteriosus; the clinical conference by Drs. Schnabel and Leivy presents the subject of cardiac patients in their relations to other associated diseases; Dr. Kern ably discusses the co-existence of bronchial asthma and cardiovascular disease. A discussion which is quite timely and informing is the one presented by Dr. Leon H. Collins, Jr., entitled, "The Results of Oxygen Administration in Pneumonia". It is interesting to note that as a result of his study, he believes that oxygen properly administered is definitely beneficial in this serious disease.

HUMAN ANATOMY

By B. C. H. Harvey, M.D., Professor of Anatomy, University of Chicago. Published by American Medical Association, Chicago, 1931.

The material contained in this volume was compiled by the author and reproduced in *Hygeia* as a means of acquainting the intelligent laity with a background of general anatomy. These articles have been incorporated in this volume in response to a demand for a collection of these magazine articles. In collecting the material in book form, the author has included many new illustrations and has augmented his descriptions in many sections. The book is highly suited for use by nurses, students in general, scientists, and for the intelligent layman who desires a comprehension of this subject. The language employed throughout is characteristically clear, straightforward and concise. No similar treatise on this subject has come to our attention.

GYNECOLOGY AND UROLOGY FOR NURSES

By Samuel S. Rosenfeld, M.D., F.A.C.S. 230 pages, illustrated. William Wood & Company, New York, 1931. Price, \$2.00.

This little hand-book is packed surprisingly full of practical information about gynecology and female urology. It apparently was not intended to supplant a complete text book in these subjects but rather to serve as a supplement to which the nurse may go for a review of the fundamental points involved.

The book is divided into two parts. Part one describes the anatomy, physiology and pathology of the female genitalia, with chapters on examination of the patient, non-operative treatments, special operations, and the preparation of the patient for the same. Part two describes the anatomy and pathology of the kidneys, ureters, bladder and urethra with their operations and postoperative care.

The book is fairly well indexed and has numerous illustrations. F. W. R.

THE NURSE'S MEDICAL LEXICON

For the use of graduate and student nurses, of premedic and dental students, and of the general public, by Thomas Lathrop Stedman, A.M., M.D., New York. William Wood & Company.

To our knowledge there is no adequate lexicon of medical terms for use by student and graduate nurses, dental hygienists, physician and dentist office assistants, workers in the field of public health and laymen. These individuals when desiring information relative to medical terms have in the past resorted to dictionaries prepared for the use of physicians. In many instances the definition so obtained, because of its technical character, fails to serve a useful purpose. This volume, prepared by an author long recognized as an authority in medical nomenclature, has been compiled to supply this need. The author has attempted to include all terms which may be encountered by the group cited above in the pursuit of their studies and to furnish definitions in terms which are readily understandable to the laymen. As in any abridgement, certain errors of omission will be noted but it is our belief that this number will be small, since the volume is apparently quite comprehensive. The book appears especially desirable because the definitions are given with sufficient details to satisfy the average inquiry. This volume may be safely recommended to any person requiring a medical lexicon of the commoner medical terms.

SURGICAL PATHOLOGY OF THE DISEASES OF BONES

By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. 272 pages with 211 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1931.

This excellent monograph presents a great deal of information briefly, clearly and completely. It is the only volume to our knowledge which presents the entire subject of surgical pathology of the osseous system with a summary of the world's literature on the subject in one volume.

The book is written primarily for the physician although, because of its arrangement, it will be found entirely suitable as a text book for students. Since the form of presentation is that of a practicing surgeon rather than the pathologist's, the volume will appeal to the general practitioner in his systematic study of bone pathology or as a reference text for infrequent or unusual manifestations of bone disease.

The author is especially to be commended upon his classification of bone tumors, since this classification is a highly practical one as well as one based upon sound developmental observation. It is the author's contention that a subject of this sort is best told by means of pictures, and he has, therefore, embellished his work with some two hundred well chosen illustrations.

The JOURNAL

of the

Iowa State Medical Society

VOL. XXII

DES MOINES, IOWA, MARCH, 1932

No. 3

LINGUAL QUINSY, WITH CASE REPORT*

HARRY H. LAMB, M.D., Davenport.

Lingual quinsy, secondary to lingual tonsillitis, is an acute, purulent infection of the parenchyma of the base of the tongue. The condition is rare, extremely painful and may be dangerous. It is most likely to attack adults in middle life and men more frequently than women. A. B. Bennett¹ states that "cases have been reported at the respective ages of nine months and eighty years." The etiology is uncertain. There is no constant predisposing factor, although exposure may make the individual more susceptible. Knight² mentions the possibility of foreign bodies in the lingual tonsil predisposing to abscess formation. Lingual quinsy is frequently associated with, or secondary to, acute pharyngitis. The bacteriology is mixed.

ANATOMY

Swain³ defines the lingual tonsil as "that part of Waldeyer's ring of lymphoid tissue which is situated at the base of the tongue, lying directly behind the papillae circumvallatae and stretching in the adult across the whole width of the tongue." Thein⁴, in his masterful thesis, states that "the tonsil is composed of lymph nodes arranged in groupings of two or three nodules. These nodes extend laterally from the median line and thus form what might be called two lateral lobes. The gland is cryptic and is covered with stratified squamous epithelium. It lies on a connective tissue base which is reticular in character and contains many mucous glands." This base to all intents acts as a capsule. He also calls attention to the rich supply of lymphatics which are divided into superficial and deep systems. The former lies on the dorsum and sides of the tonsil, while the deep system lies in the musculature. They are in free communication and drain in the suprahyoid, submaxillary and deep cervical glands.

SYMPTOMS

The symptoms of lingual quinsy may be classified as local and general. The most constant local symptom is pain which becomes most excruciating in character and is made much worse by any movement of the tongue, as in talking or swallowing. Prens⁵ describes the pain as being acute and steady in the tongue, neck, ear and temporal region. Characteristically this pain is made much worse by gentle pressure with the tongue depressor. There is a dry huskiness to the voice and an irritating, non-productive cough. The breath becomes horribly fetid and the tongue is covered with a thick fur. The tongue is swollen and may even protrude from the mouth. This swelling may be fairly well limited to one side, but as Fitzwilliams⁶ points out, "the tongue, being a soft organ, having no strong fascial boundaries, but being contained merely in a sheath of mucous membrane, is capable of swelling suddenly and rapidly to enormous size." Prens⁵ reminds us that fluctuation is very difficult to make out because the tongue is elastic and the pus tends to burrow down. The lingual tonsil appears markedly swollen and reddened. The entire larynx is slightly edematous and inflamed. Drooling is frequently present and may be attributed to swelling and increased pain on attempts to swallow. Usually the cervical and sometimes the submaxillary glands are swollen and tender.

Of the general symptoms, Wright and Smith⁷ state that "in this situation more than elsewhere in the pharynx the liability to systemic infection is marked." The drawn, pained, anxious, almost desperate expression of the face is striking. The temperature is elevated three or four degrees and the pulse rate is markedly increased. There is considerable leukocytosis and the urine is highly concentrated with possible albumin and cast formation.

DIFFERENTIAL DIAGNOSIS

Barlow⁸ summarizes the differential diagnosis very capably: "Anthrax is necrotic and the discharge from the ulcer is bloody. Microscopic ex-

* Address of the Chairman, Section on Ophthalmology, Otology and Rhinology, Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

amination reveals the typical bacillus anthracis. Actinomycosis is differentiated by the lack of extreme pain, slower onset, and the finding of the typical sulphur bodies and ray fungus. Leprosy is associated with anesthesia and other signs of the disease. Gumma of the tongue is not painful; the swelling is firm; it is usually circumscribed and is not associated with such extensive parenchymatous glossitis. Other signs of syphilis are manifest, such as general glandular involvement. In salivary calculus the submental and submaxillary glands are painful and swollen and it may even be painful to move the tongue, but this feature is not so marked as in abscess. The calculus can readily be palpated in the duct." Malignancy of the tongue is slower in onset, tends to surface ulceration and the swelling is much more firm.

TREATMENT

Early and complete evacuation of the pus is paramount. Fitzwilliams⁶ concludes that the abscess will not spread to the skin, preferring to burrow toward the mucous membrane. He, Barlow, Foster, Miller, Swain and others agree that drainage is best obtained through the mouth. If one is so fortunate as to have the abscess point or to be macroscopically localized, he should make free incision and evacuate the contents. When the abscess is not definitely localized, I have found the aspirating needle of inestimable value in locating the cavity. Since the arteries of the tongue, the lingual artery and its branches, the hyoid, the dorsalis linguae, sublingual, and ranine, run lengthwise through the tongue, incision should be made longitudinally into the abscess. With the aspirating needle in place an incision is made through the mucous membrane at its point of entrance and a grooved director slipped into the cavity. The pus, which is released under considerable pressure, is horribly fetid, and the relief afforded the patient remarkable. A gauze or tube drain should be inserted, being shortened very slowly in order that the cavity may heal in firmly. During this stage of convalescence hot sprays and gargles are quite soothing.

CASE REPORT

Mr. M. K., age thirty-six, had complained of sore throat for ten days. His past history was entirely negative; he claimed he was never sick a day in his life.

The sore throat had begun about ten days before examination and did not yield to ordinary methods of treatment. He was seen by a general practitioner, three days before admission, who painted faucial tonsils with 10 per cent silver nitrate and prescribed an iodine gargle. The pain became increasingly severe, radiating to the right ear and

right side of the neck. He had a dry non-productive cough for several days. He was unable to eat or drink and had considerable difficulty talking because of the pain.

On examination his temperature was 101.6 degrees, his pulse 120. His face had a very pained, anxious expression, with a wild, hunted look about the eyes. His lips were dry and cracked. His breath was very foul. His mouth was opened with some difficulty; he had a perfect set of teeth; his tongue was heavily coated and slightly swollen and immobile. The entire pharynx was reddened and inflamed, with a dry, glazed appearance. The lingual tonsil was very red and markedly swollen,—a little more so on the right side, with considerable exudate. The epiglottis and larynx were slightly reddened. Expression of the faucial tonsils and shrinkage of the lingual tonsil with a 2 per cent cocaine and adrenalin solution gave the patient some temporary relief. He was instructed to use an aspirin gargle, alternating with a hot Seiler's gargle, every two hours. General eliminative measures were outlined. Three days later the symptoms were all very much worse. The pain was intolerable and the patient had been unable to sleep or rest for seventy-two hours. The right side of the tongue was more swollen than the left. Gentle pressure of the tongue depressor on the right side caused the patient to cry out with pain. I believe this extreme tenderness on slight pressure is a characteristic symptom. There was no swelling in the floor of the mouth. The right cervical glands were enlarged and tender. The nose and ears were essentially normal.

A diagnosis of lingual quinsy was made, but I did not know where to incise to evacuate the abscess. Under surface anesthesia, with 5 per cent cocaine, an aspirating needle was inserted at the junction of the inferior surface of the tongue and the frenum, at the level of the right lower first molar, and directed backward and downward toward the right lingual tonsil. About six c.c. of horribly fetid pus was aspirated. With the needle in place, a longitudinal incision was made in the mucous membrane and following the course of the needle the abscess was laid open. Approximately six more c.c. of the pus was evacuated, to the phenomenal relief of the patient. A gauze drain was inserted and the patient instructed to use hot Seiler's gargle every two hours. It was necessary to enlarge the opening with a spread hemostat two days later. The cavity was allowed to granulate rather slowly and in twelve days he was well.

SUMMARY

1. Anatomically and physiologically, the lingual

tonsil is similar to the faucial tonsil and is subject to the same diseases.

2. Lingual quinsy should be considered in all cases of a painful, swollen, tender tongue.

3. The treatment of lingual quinsy is complete evacuation of the abscess via the mucous membrane.

CONCLUSIONS

Lingual quinsy is a somewhat rare, extremely painful abscess of the parenchyma of the base of the tongue, best treated by complete evacuation of the abscess cavity through the mucous membrane.

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ENDOMETRIOSIS OF THE ABDOMINAL WALL

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The general unfamiliarity, clinical and surgical, with this tumor-like formation is the basis for the report of this case and a discussion of certain phases of "endometriosis of the abdominal wall," particularly when occurring in a laparotomy scar.

CASE REPORT

Mrs. B. C., a young, white, divorcée of twenty-three, was referred to the gynecologic service at the Health Center on October 22, 1929. She complained of a small lump, in the right lower abdominal wall, which enlarged and was painful at times.

Family History: Her father and mother, two brothers and two sisters were all living and well. One son of eight was living and well. A son died at birth in 1924 of cerebral hemorrhage, following a Cesarean section.

Previous History: She had the usual children's diseases, such as chickenpox, smallpox, scarlet fever, measles, pertussis, and mumps twice. She had tonsillitis on the average of once a year. She was married at fifteen and obtained a divorce about eight years later because of infidelity. She denied venereal infections. Menstruation commenced at thirteen, which proceeded regularly and was of average duration until 1925, when it became irregular. The periods would then occur anywhere from fourteen to ninety days apart, would last

three days, were scanty, but with slight discomfort. In 1922 she had a normal pregnancy until May 25, when she developed a severe frontal headache, and had five convulsions. She was about at term, but not in labor, and was taken to a hospital, where a classical cesarean section was performed. Convalescence was normal and the patient was discharged in three weeks. In 1924 she had her second normal pregnancy until September 12, when she developed acute, sharp, severe labor pains, requiring her to walk on her tip toes. She would faint on getting out of bed. These symptoms continued for three days, without cervical dilatation, when her second classical cesarean section was performed. This convalescence was not smooth like the former one, as abdominal pain persisted throughout and fever was present. At the end of three weeks she was taken

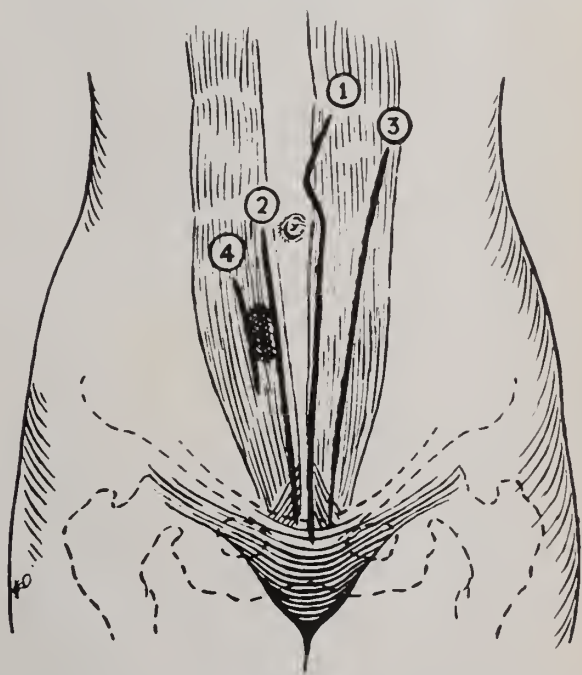


Figure 1. Shows incisions of patient's abdomen: (1) First cesarean section; (2) Second cesarean section; (3) Exploratory laparotomy; (4) Present operation for removal of endometrioma of wall.

home. She was confined to her bed most of the time for a year, with attacks of abdominal pain, fever, nausea and vomiting. Since the pain was in the right half of the abdomen, appendicitis was suspected. From October 5, 1925, for a week, her pain, vomiting, and abdominal distention became progressively worse, until she had to sit up in bed, or sleep with her thighs flexed on her abdomen. A tentative diagnosis was made of foreign body in the abdomen, and peritonitis. A hospital laparotomy was performed on October 12. A sponge was removed, also the appendix, both tubes, the right ovary and fundus uteri. Some adhesions

were resected. This operation was done midway between her periods. Drainage was instituted and subsequently removed on the seventh day. She was discharged from the hospital at the end of three weeks. The day before she left the hospital, something broke, and about a pint of foul, greenish pus was discharged from her vagina, with much subsequent relief.

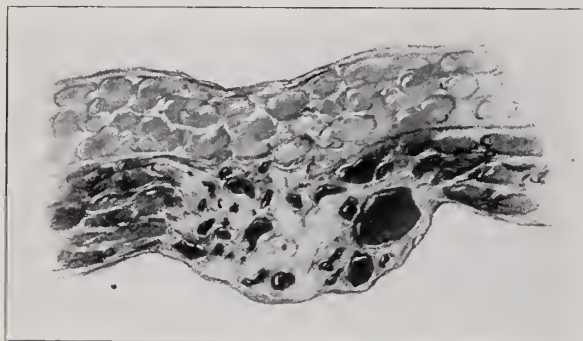


Figure 2 shows cross section of the endometrial tumor, times $1\frac{1}{2}$.

Present History: In 1927 this patient noticed a small lump in the middle of her second cesarean section scar laterally. It gradually enlarged for six months and then ceased to grow. It was moderately tender to the touch all of the time. It would enlarge, midway between periods, with shooting pains; both would subside at menstruation.

laparotomy scars. The vulva, Bartholin glands, urethra, perineum, vagina, and bladder floor were normal. The cervix was normal. The uterine fundus was absent. The cervical stump was smooth, movable, and not tender. The left ovary was normal in size and contour, and anterior to the cervical stump. The rectum was negative. In the mid third of her second cesarean section scar (see Figure 1), extending to the lateral border, was a lump the size of a small walnut. It was moderately hard, semi-movable, and seemed to be attached to the rectus fascia. It was slightly tender on palpation.

Diagnosis: On the findings of a tumor mass, occurring in a lower laparotomy scar as the result of a pelvic operation, which had a sequence affecting menstruation, the diagnosis of endometrioma of the abdominal scar was made, and operation advised.

Operation: On February 18, 1930, under ether anesthesia, an elliptical incision was made around the mass. The tumor was exposed, attached firmly to the substance of the rectus fascia. It projected somewhat into the rectus muscle, but did not seem to be attached to it. The tumor and the fascial portion were excised. The wound was sutured in layers. Convalescence was normal. Healing was by primary intention.

Tumor: The tumor was 2 x 3 centimeters in size. It was quite solid, fibrous, and of a light

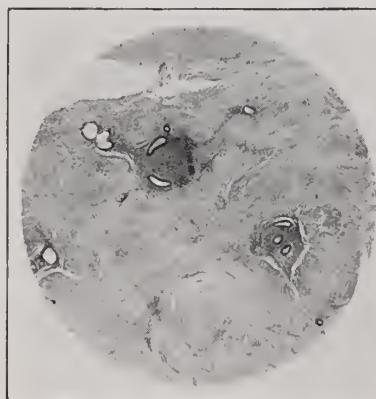


Figure 3.

Fig. 3. Low power photomicrograph showing several foci of typical endometrial glands and stroma. Old and recent hemorrhages present about some of the glands. Serial sections would probably show connection of some of these foci with each other. A dense fibrous reaction in the abdominal wall about the ectopic endometrial tissue.

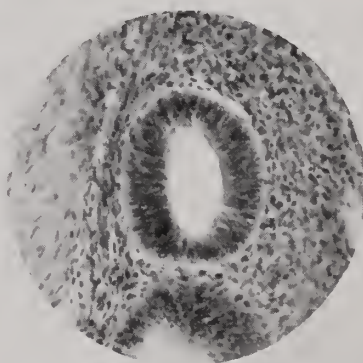


Figure 4.

Fig. 4. High power photo showing endometrial glands and stroma.

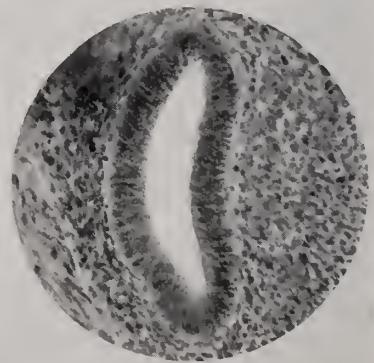


Figure 5.

Fig. 5. High power photo showing endometrial glands and stroma.

Physical Examination: The patient was a blonde female of twenty-three, weighing 118 pounds, of average height, and appearing quite healthy. Her examination was negative, except for imbedded, infected tonsils, and three healed

grey color. Whitish fibrous bands penetrated the substance. Between these bands were cystic areas, which varied in size from a pin point to the size of a small pea. The cysts were dark brown or almost black, and on cutting and scraping exuded a substance almost like old blood. The pathologist's report, made by Dr. W. E. Sanders, was as follows: "Following are the macroscopic and micro-

scopic reports on the endometrial tumor removed from B. C.: Macroscopic—chronic inflammatory tissue. Microscopic—tissue consists chiefly of fibrous tissue. Scattered through the fibrous tissue are glandular areas, some of which are dilated into cysts. The latter are lined with low cuboidal epithelium, while the glands proper are lined with high columnar epithelium, consisting of single layers with deeply staining basal nuclei, nowhere tending to extend beyond the basal membrane nor assuming papillary forms. Glandular areas are surrounded by areas of round cell infiltration and fibroblastic hyperplasia. Some parts of tissue show small hemorrhages which seem to have occurred in these small glandular cysts."

Comment: This case seems to bear out fully Sampson's theory of seedling transplantation. Here, during the second cesarean section, the uterine cavity was opened and the fallopian tubes manipulated. Bits of uterine or tubal mucosa came in contact with the laparotomy wound, and when sutured became buried therein, later to grow and produce pain. The tumor would go through a regular menstrual cycle of its own. The slides (Figures 3, 4, 5) of this patient's tumor were further re-checked by Professor V. C. Jacobson, who concurred in the diagnosis and who so kindly contributed the notations on the microphotographs.

HISTORY AND ETIOLOGY

The first recorded knowledge of endometrial proliferations began with the year 1868. Von Rokitsansky first described an adenomyoma of the uterus.¹ Then for more than thirty years the subject lay dormant until von Recklinghausen,² as the result of researches, proposed the theory that these tumors might be misplaced remnants of the wolffian body and Muellerian duct. In 1919, Meyer advanced the serosal or celomic theory, and popularized it with the German school. Next year, Cullen voiced the opinion that these tumors were invasive growths from the uterine mucosa. In 1921, Sampson published his first article, in which he explained his transplantation theory.³ Halban⁴ later suggested the lymphatics as a mode of endometrial dissemination. Later, in 1927, Sampson further added that these tissues may be transported by the venous route.⁵

Implantation Theory: Sampson and others⁶ have shown that fragments of living uterine endometrium or tubal mucosa may escape during menstruation, or by manipulative pressure, by curettment, by force from Rubin tubal insufflations,⁷ or by operative exposures and manipulations. This escape is through the distal tubal lumen, or from the uterine cavity. The tissue becomes engrafted on the ovary or other structures, and

grows. Secondary growths may spring from the primary ones, especially from the ovary, and widespread dissemination takes place. He has occasionally observed during operation in a menstruating woman that blood may escape from the fimbriated ends of the fallopian tubes. Microscopic studies of this blood show not only epithelium cast off by menstruation, but also bits of stroma. To support his theory, he has made histologic researches in thirty patients having had single or double salpingectomy. In thirty-six tubal stumps, he found seedlings or sprouts growing from the mucosa of these stumps. To further clarify and strengthen his theory, Jacobson and others have been able to transplant fragments of endometrial tissue of rabbits and monkeys to their respective peritoneal cavities and make this tissue grow.⁸ The formation of endometrial tumors in laparotomy scars after operations or manipulations of the uterus or tubes seems almost positive proof of the soundness of this theory. Although it has its critics, this theory is the most generally accepted, the most simple to believe, and the most logical, though perhaps at times there may be exceptional occurrences. Also favoring this theory are the facts that it occurs only during the menstrual span, and that it has no homologue in the male. Sampson has further suggested the venous and lymphatic routes as modes of transplantation of these endometrial fragments.

Serosal Theory: Meyer suggested that all the epithelia of the female genital tract are formed from the celomic epithelium of the urogenital folds. These epithelia comprise the germinal epithelium of the ovary as the lining of its follicles, also the invaginations of the Muellerian duct, which is represented by the endosalpinx, endometrium, endocervix and vaginal mucosa. An exciting force then accentuates the growth. In support of this theory of aberrant Muellerian mucosa are the recent researches of Hartman of the Carnegie Institute of Embryology, in which he found abnormal epithelial growths on the surface of opossum ovaries. The ovaries of these animals are not enclosed in a tubal sac, and there is no such thing as menstruation. Other observers believe that the celomic epithelium or the fully developed peritoneum may, through some influence, go through a metaplasia and produce these tumors.

Von Recklinghausen's Theory, which preceded Meyer's, was that these growths came from aberrant portions of Muellerian and wolffian duct fusion. These form the fallopian tubes, uterus and vagina. Cullen subscribed somewhat to this theory, and also explained the etiology of umbilical endometriosis by the fact that in early embryonic

life, the Muellerian and wolffian ducts are very close to the anterior wall.

Lymphatic Dissemination Theory: This was proposed by Halban. Sampson gives credit to the value of this theory by his statement, "We are warranted in stating that the invasion and dissemination of benign endometrial tissue employ the same channels as the invasion and dissemination of cancer."

Hormonic Theory: Observers, from time to time, suggest the possibility of inflammatory irritation as the cause of this metaplasia or heteroplasia. Sampson's observations are that inflammation does not vary the incidence. Hormones are then mentioned in a mild way as effecting this growth—and why not?⁹ The ovary and other pelvic structures produce general acting hormones. They might and presumably do produce local acting or zonal hormones. Zonal hormones can be considered as of two types. They may be called prohormones or anabolites, and antihormones or katabolites. These probably normally remain in a balanced ratio. It is presumed that the prohormones are the more potent. When, through some dysfunction, the prohormones gain ascendancy over the normal ratio, the latent endothelial tissues are stimulated to proliferation and become grossly apparent. This theory would explain why females are so affected while males are immune from endometriomata. That these hormones may only exist within a limited zone from their source of production would explain why endometriomata do not occur above the level of the umbilicus. This theory would also give cognizance to the transplantation, transmigration, metaplasia and embryonic rest theories, as well as approach the threshold of that mysterious domain of the cause of malignancy.

SITES OF ENDOMETRIOSIS

As compiled to date, these sites are shown in the accompanying figure and numbered accordingly:

ENDOMETRIOSIS OF LAPAROTOMY SCARS

This condition follows only pelvic operations. The first case on record was by Meyer¹⁵ in 1902. At first it was looked upon as a rarity and considered rather infrequent, until the American Gynecological Society meeting in 1925, when a symposium was given on the subject, numerous cases were reported, and a general discussion was held by leading gynecologists. Since then frequent case reports have been published.¹⁶ In August, 1928, Hosoi and Meeker¹⁷ made an extensive survey and collected eighty-seven cases. Since then two more cases were added to the literature and together with the one herewith re-

ported would bring the total to ninety cases. In a recent communication from Dr. Sampson, he feels that more than a hundred may have been reported to date. This, however, is quite infrequent, as compared with intra-abdominal or pelvic endometriosis, as Sampson found it thirty-seven times in one hundred seventy pelvic operations in the year ending May, 1922. In the year ending

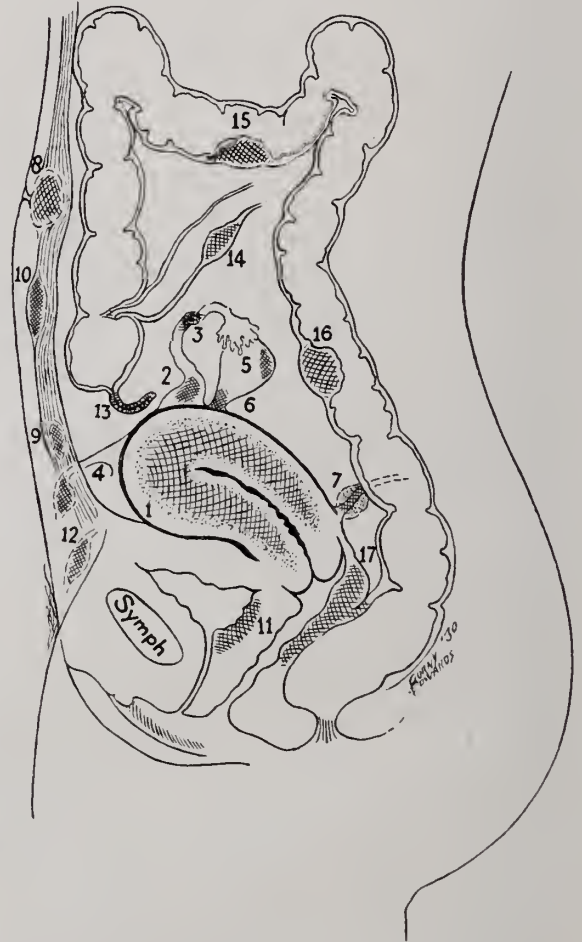


Figure 6. (1) Uterine Body. (2) Uterine Horn. (3) Fallopian Tube. (4) Round Ligament (10). (5) Ovary. (6) Utero-ovarian Ligament. (7) Uterosacral Ligament. (8) Umbilicus. (9) Rectus Muscle. (10) Rectus Fascia. (11) Bladder Wall. (12) Inguinal Lymph Nodes. (13) Appendix. (14) Ileum. (15) Transverse Colon. (16) Sigmoid Colon. (17) Rectovaginal Septum.

May, 1923, it occurred sixty-four times in two hundred ninety-six operations. Recently, Cullen had two pelvic growths of this type during one day's surgery.¹⁸

INCIDENCE¹⁹

Thirty-two cases followed ventrofixation of the uterus; 28 followed salpingectomy, oöphorectomy or both; 20 followed cesarean section; 15 followed appendectomy; and 5 followed hysterectomy. Internal adhesions to the pelvic organs or omentum were noted in 30 cases, and menstrual fistulae occurred in 16 cases.

AGE

Most of the patients were between twenty and forty-five years, the oldest being fifty. Note that this is in the ovulating or menstruating age.

MARITAL STATE

Marriage predominated four to one, with a marked tendency in those who had borne children.

Appearance Time: The endometriosis shows up in from a few weeks after operation to twenty-six and one-half years afterward.

Symptoms:

1. A tumor, which is discovered by accident in or near the line of a laparotomy scar. This tumor increases in size at the period or has some fairly definite time relation to the menses. It has a predilection for the lower end of the scar.

2. Pain is present in the tumor either before, during, or after menstruation.

3. Bleeding may occur from the scar or nodule at the menstrual period in about 16 per cent of the cases.

4. Menstrual discomfort is usually increased, tending to a dysmenorrhea.

5. Menorrhagia is frequently present.

ENDOMETRIOSIS OF THE UMBILICUS

This interesting tumor was first described by Goddard²⁰ in 1909, and later by Cullen.²¹ It remained for Lauche, in 1924, to establish its nature and its relationship to other endometrial tumors.²²

Incidence: These tumors occur usually between the ages of twenty-seven and fifty-seven, slightly later in life than similar tumors elsewhere. They have been present for two months to twenty-seven years before diagnosis or treatment.

Symptoms: They are similar to the endometrial tumors of laparotomy scars. There is noted a tumor near or in the umbilicus which slowly increases in size, particularly during the menstrual period. Associated with this hypertrophy and hyperplasia are pain and tenderness. At times these tumors are accompanied by a discharge of a bloody fluid, similar to menstrual blood.

TREATMENT

The treatment of both of these types of tumors is excision. Usually it is quite simple and the cure is permanent. At times, though, the tumor penetrates the entire abdominal wall and becomes incorporated into some pelvic organ or intestine, with dense surrounding adhesions. Thus operation becomes difficult. In those cases in which excision of the growth is almost impossible, x-ray or radium may be tried, though the results are disappointing. The surer and better method is double and complete oöphorectomy, which in time results in the endometrial tumor atrophy or absorption.²³

SUMMARY

1. A case is reported of an endometrioma of the laparotomy scar following cesarean section, which seems to be the result of transplantation of uterine or tubal endometrium.

2. Diagnosis was made before operation, because it followed a uterine operation, and the symptoms had definite cycles in relation to menstruation.

3. An hormonal theory is advanced.

4. Treatment of simple cases is extirpation of the tumor. In extremely difficult cases, bilateral oöphorectomy results in atrophy of the tumor and relief.

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PERNICIOUS ANEMIA AND SUBACUTE COMBINED DEGENERATION OF THE SPINAL CORD*

(Review of some of the newer aspects of this Disease)

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Since the appearance of the Minot and Murphy liver diet in the treatment of pernicious anemia, an enormous amount of material has been published relative to the therapeutic aspect of the disease. The aim of this paper is to give a brief review of some of the thoughts concerning the etiology of Addison's anemia and subacute combined degeneration together with a word relative to the response of the symptoms of the latter condition to treatment.

The etiology remains obscure. Many of the older writers considered the disease due to intestinal infection or toxemia resulting from oral sepsis and achlorhydria. Many writers still feel that achlorhydria plays a definite role in the pathogenesis. The theory that the anemia results from an hemolytic toxin has been quite generally discarded. The majority of observers now feel that the difficulty in pernicious anemia is a failure in maturation of the red blood cells. Recently, Castle¹ has advanced the hypothesis that: "The genesis of the disease pernicious anemia is dependent upon the inadequate gastric digestion of proteins, thus permitting the development of a virtual deficiency in the presence of a diet adequate for the normal individual." As a result of their observa-

tions and experiments in cases of Addisonian anemia, Castle and his collaborators have concluded: (a) "that the active constituent (intrinsic factor) of the normal human fasting gastric contents is in all probability secreted by the mucosa of the stomach and is not detectably present in normal saliva or duodenal contents free of gastric juice or in the secretions of any portion of the gastro-intestinal tract of the pernicious anemia patient; (b) this substance is probably organic, thermo-labile, possibly an enzyme capable of interaction with protein (extrinsic factor) or closely related substances in neutral solution, resulting in the production of material having, when administered to pernicious anemia patients, a marked hematopoietic effect. If an enzyme, it is certainly not pepsin; its properties as so far determined are only in certain respects similar to those of rennin; (c) the lack of this particular property (intrinsic factor) of the gastric contents of the pernicious anemia is probably the essential defect leading to the development of the disease, through a failure of the normal reaction, occurring in these experiments with beef-muscle proteins, (extrinsic factor) and the normal human gastric juice; (d) it is also concluded that the existing tests for hydrochloric acid and pepsin of the gastric juice are not necessarily of value in determining the presence or absence of the intrinsic factor essential to the reaction between normal human gastric juice and beef-muscle as described in these papers."

Castle states further that the administration of hydrochloric acid alone to a pernicious anemia patient will not safeguard him from the development of degenerative cord changes. Vanderhoof² in 1923 wrote an article on gastric achylia and its relation to subacute combined degeneration of the cord in which he stressed the importance of the use of dilute hydrochloric acid, together with the eradication of infectious foci in the treatment of that condition. He described the clinical progress of four cases which presented the signs and symptoms of combined degeneration without anemia, treated in this manner. One patient was subjectively cured. Two were apparently well, and one was greatly improved. In 1930,³ however, he published an account of the development of the typical pernicious anemia syndrome in a patient in whom the achlorhydria had been discovered five years previously, the patient having received four drams of dilute hydrochloric acid daily during that interval. The patient had presented no evidence of pernicious anemia at the time the achlorhydria was originally discovered. No mention was made in this case of any manifestations of involvement of the nervous system.

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ASSOCIATION OF PERNICIOUS ANEMIA AND
SUBACUTE COMBINED DEGENERATION
OF THE SPINAL CORD

Hurst⁴ stated that the division of pernicious anemia and combined sclerosis was artificial. He believed that the achlorhydria was the predisposing cause, and suggested that both a hemotoxin and a neurotoxin were formed in the invaded intestine and that these two toxins caused the different manifestations in the blood and spinal cord respectively.

The incidence in which combined sclerosis occurs in the patients with pernicious anemia varies greatly according to different writers; from 2.3 per cent in Bramwell's series to 80.6 per cent in Woltman's,⁵ who reviewed 150 histories of pernicious anemia patients who were subjected to complete neurologic examinations at the Mayo Clinic.

Sutton,⁶ in a review of 56 cases of pellagra, found evidence of involvement of the posterior and lateral columns of the cord in many instances. In five necropsies on patients in this series he found degenerative changes of the combined type in three, the most marked involvement being in the lateral tracts. Incidentally he found achlorhydria in a striking number of the patients.

Wood⁷ reported an instance of subacute combined degeneration in a case of sprue. The disease presented most of the characteristic features of pernicious anemia, so much so that Wood was led to advance the statement that the factor which determined the diagnosis of pernicious anemia or sprue in a given case was purely geographical. Many other writers have held the same opinion. The close similarity of the two diseases and the knowledge that for many years sprue had been considered a deficiency disease led Conner in 1926 to the use of a high vitamin diet in the treatment of pernicious anemia patients.

The occurrence of pernicious anemia in cases of gastric carcinoma has been noted frequently in the literature. Garvey and Stern⁸ published an account of a male, aged fifty years, who presented himself for examination because of paresthesias of his extremities, spasticity and ataxia. He was found to have a definite combined degeneration of the spinal cord and a few weeks later a carcinoma of the pyloric end of the stomach was discovered. He died several weeks after operation and at necropsy the bone-marrow was found to be hyperplastic, but not involved by metastases and the spinal cord presented degenerative changes in the posterior and lateral columns.

Hartman⁹ in 1921 described the blood changes simulating those of pernicious anemia, occurring

in a patient two years after a total gastrectomy at the Mayo Clinic. In this case, however, there was no evidence of involvement of the spinal cord, nor were metastases or evidence of recurrence of the malignancy found.

Timme¹⁰ described a case of subacute combined degeneration in which the symptoms appeared rather abruptly after a severe mental shock. The case was also unusual in that typical Argyll Robertson pupillary reflexes were present in the absence of any history or findings suggestive of syphilis. The blood and spinal fluid gave negative Wassermann reactions.

Many accounts of subacute combined degeneration without anemia have been reported in the literature. Of Woltman's series, 1.4 per cent showed symptoms of spinal cord involvement before anemia was apparent. He gave thirteen months as the longest time interval between the development of nervous manifestations and the time that the anemia was observed.

Cadwalader¹¹ reported three cases which presented evidence of combined degeneration with only mild or no anemia for as long as three years. All of the cases developed a rapidly fatal anemia during the last two weeks of their course. Bramwell¹² described a patient with the usual findings of postero-lateral sclerosis for three years, but with a normal blood picture until a fortnight before death, when there occurred a rapid deterioration of the blood, the red cell count dropping from normal to 600,000 per cubic millimeter and the hemoglobin to 28 per cent, with a color index estimation of 2.3. Cadwalader felt that although little or no anemia might be present throughout the greater part of the illness, it always developed before termination of the disease. The occurrence of many similar cases, that is, combined degeneration without anemia but with other characteristic features of pernicious anemia, have led most observers to discard the theory of the spinal cord pathology as being due to anemia.

FAMILIAL PERNICIOUS ANEMIA AND SUBACUTE
COMBINED DEGENERATION

The hereditary factor in subacute combined degeneration has been observed only in so far as that condition is associated with pernicious anemia. Many cases of familial pernicious anemia may be found in the literature.

Hurst¹³ published an incidence of pernicious anemia and combined sclerosis in a woman whose two maternal aunts had died of pernicious anemia.

Dorst¹⁴ described a family in which the mother and four children died of Addisonian anemia, four of the five having evidence of changes in the spinal cord. In the same family only two of the remain-

ing six members had normal gastric secretions. Dorst concluded, therefore, that achlorhydria was the primary predisposing factor in pernicious anemia.

Gulland¹⁵ in a series of 500 cases of pernicious anemia noted the not infrequent occurrence of pernicious anemia in the same family, the largest incidence being five in one generation.

MacLachlan and Kline¹⁶ in 1926 published the extremely interesting account of seventeen cases of anemia occurring throughout four generations. Thirteen of the seventeen patients had died of anemia, eight of this number were thought to have had definite pernicious anemia, three were living with a diagnosis of undoubted pernicious anemia. There were three incidences in which manifestation of spinal cord damage was apparent.

Ungley and Suzman gave an account of a family consisting of three brothers and one sister, two of whom had subacute combined degeneration of the spinal cord and two Addisonian anemia. In addition a daughter of the sister had combined sclerosis and two sons of one brother had achlorhydria.

Draper and Schauman¹⁷ have both expressed the opinion that many groups of familial pernicious anemia are overlooked by failure to inquire into the family history.

Recently Moersch³² and the writer reported the occurrence of pernicious anemia in two sets of twins, in one pair the manifestations of subacute combined degeneration being the outstanding feature.

FAMILIAL OCCURRENCE OF ACHLORHYDRIA

Of late more and more interest has centered about the hereditary aspect of achlorhydria in pernicious anemia. Conner¹⁸ studied the gastric acidity of 154 relatives of 109 patients with pernicious anemia and found an absence of free hydrochloric acid in 25.9 per cent as compared to 15.2 per cent of a series of 5,000 patients who received the test meal during the course of their examination for a variety of medical diseases. He felt that there was "an inherited tendency toward the occurrence of achlorhydria in many blood relatives of patients with pernicious anemia over and above such tendency among patients with various other diseases, even among those with gastro-intestinal symptoms." To illustrate: Anderson,¹⁹ in a series of 4,000 gastro-intestinal cases, found achlorhydria in only 10 per cent. Other writers have found incidences as low as 3.5 and 4 per cent. Of the age group between forty and forty-nine years of the blood relatives of pernicious anemia patients in Conner's series, 46.1 per cent showed achlorhydria. This was thought to be particularly significant be-

cause it is about the age in which pernicious anemia and subacute combined degeneration are most apt to make their appearance.

Wilkinson and Brockbank,²⁰ working on this same problem of familial achlorhydria at the Manchester Royal Infirmary, collected from the literature 125 families in which two or more members were affected with pernicious anemia with or without the complication of subacute combined degeneration of the spinal cord. They found reports of fifty-one families in which achlorhydria and pernicious anemia existed simultaneously. Among 291 blood relatives of pernicious anemia patients they found seventy incidences of achlorhydria, a percentage of 24.1, practically identical with that of Conner's series. They also found that 50 per cent of their own patients showing achlorhydria likewise had no peptic activity. Their conclusions were to the effect that there is a definite hereditary factor in the etiology of pernicious anemia, this factor being expressed as an hereditary diminution or predisposition to low acid production in the gastric secretory functions.

An interesting point in the treatment of pernicious anemia is the question regarding the return of free hydrochloric acid in the gastric contents. While some authors maintain that it never returns, Hurst,²¹ Shaw,²² Heeres,²³ Connery and White²⁴ have reported accounts of patients with pernicious anemia and achlorhydria, who, following treatment, showed the presence of free hydrochloric acid in normal amounts in the stomach contents.

TREATMENT OF PERNICIOUS ANEMIA

In spite of the enormous amount of literature relative to the subject and the universally accepted fact that pernicious anemia patients can, in the absence of complications, be kept in a state of normal health, there are still many instances of failure of treatment being observed. Failure of a case of apparent pernicious anemia to respond to treatment may be due to: (1) insufficient liver or a non-potent preparation of liver extract, (2) complications, as sepsis or other concomitant disease, (3) incorrect diagnosis.

Few patients with pernicious anemia will voluntarily eat sufficient whole liver to supply the therapeutic need without careful supervision, particularly in the early stages of treatment when anorexia is such a prominent symptom. Once the diagnosis of pernicious anemia has become certain, the services of a skilled cook are often more important than those of the physician. Without a variety of tasty liver dishes and constant urging, only the unusual patient will take the necessary amount of liver, which according to the original

Minot and Murphy Diet, should be 150 to 240 grams a day. At the present time there are on the market several potent preparations of liver extract which may be used successfully. The most universally used is probably that of Eli Lilly and Company, sold under the name of Liver Extract No. 343 (N.N.R.). From 3 to 8 vials a day are used in the initial stage of treatment, with a later maintenance dose of 1 or 2 a day. Conner,²⁵ Sturgis and Isaacs,²⁶ Sharp and Wilkinson, all have reported results with raw or desiccated swine's stomach similar and equal to those obtained from liver or its extract. Desiccated stomach may be obtained on the market under the name of "Ventriculin."

Strauss, Taylor and Castle³⁰ have recently reported excellent results with the use of a liver extract which they have prepared and used by intramuscular injection. This form of treatment may be used for those patients who are severely ill and who would otherwise require blood transfusions before any beneficial effects could be expected from liver therapy by oral administration. Prior to this, Castle and Taylor³¹ reported that excellent remissions could be obtained in pernicious anemia patients by single intravenous injections of material derived from as little as 20 grams of liver. Because of the occasional development of delayed reactions following the intravenous injection of the extract of liver, Strauss et al., feel that the intramuscular injection method is the more ideal. Senty³³ states that he has recently treated three patients by giving liver extract intravenously. All have responded splendidly to this form of therapy and none has manifested any immediate or latent untoward reactions other than the sensation of feeling "hot" during the injection.

Any case of anemia in the absence of sepsis or other complication, which does not respond to a potent preparation of liver or swine's stomach within a relatively short time is probably not pernicious anemia. Many instances have been observed of patients with obscure carcinoma and secondary anemia who have been treated with liver diet for months with the mistaken belief that they were suffering from pernicious anemia.

EFFECTS OF LIVER AND OTHER FORMS OF THERAPY UPON THE NEUROLOGIC PHENOMENA IN PERNICIOUS ANEMIA

There is still much confusion regarding the beneficial effects of liver upon the nervous manifestations in pernicious anemia. As a whole, however, the results are quite favorable and in some cases very striking. Certainly the marked pessimistic standpoint of some authors seems hardly justifiable.

Those who feel that recovery from degenerative changes in the spinal cord is impossible advance the opinion that apparent improvement in such patients is due to: (1) recovery from or improvement in the associated peripheral neuritis, a complication which Woltman showed was present in 4.9 per cent of all cases; (2) improvement in the patient's general condition.

Ungley and Suzman,²⁷ carrying out investigations on all cases of subacute combined degeneration seen at the Royal Victoria Infirmary after January, 1925, reported in 1929 the most extensive and detailed series thus far observed in the literature. Their cases numbered sixty. Thirty of these were treated with liver. Seventeen patients were definitely improved; eight were described as not improved or worse and five died. Of the latter group, four had serious complications and insufficient quantities of liver were taken.

The most recently published work relative to this same problem is that of Needles,²⁸ who reviewed twenty-five cases of subacute combined degeneration treated with liver or liver extract equivalent to 300 grams a day. The average period of observation in the cases in which liver was administered was 19.8 months. The average duration of the disease before the use of liver was instituted was 28.7 months in fourteen cases and 10 months in eleven cases. Of the latter eleven cases designated as "Group B," the group in which treatment was adequate and early, six patients made very satisfactory improvement, while five showed marked progression of neurologic signs despite treatment. In these cases, however, the hematopoietic response was satisfactory. His conclusion seems justifiable, therefore, that neither a pessimistic nor an overly optimistic stand may be taken regarding the value of liver therapy in the treatment of subacute combined degeneration of the spinal cord.

Minot, in reviewing the work of Ungley and Suzman, called attention to the order in which various signs and symptoms were influenced by liver treatment. "Improvement in the blood, in the patient's general condition and in the tongue and gastric symptoms occurred early. As a rule, there is but little apparent improvement in the nervous phenomena in the first two or three months of liver diet. One case, however, was an interesting exception to the rule, as improvement in the subjective sensations, coordination and power occurred within a few weeks while the red count was still about 2,000,000 per cubic millimeter. Improvement in the subjective symptoms and in ataxia usually occurs first. The return of power is gradual, progressive, and alterations in the objective signs only become evident later. The extensor

plantar responses may not disappear for long periods, e.g., about five, six, ten or twelve months. In three cases the plantar reflexes remained extensor in type even after a period of one and one-half years. Vibratory and joint sense may be very late in reappearing.

Conner²⁹ in 1928 reported the case of a Canadian farmer with pernicious anemia and subacute combined degeneration, who made a remarkable recovery on a high vitamin diet with 60 grams of liver daily. It was the privilege of the writer to examine this patient both in 1927 when treatment was first begun and again in 1928. Whereas he had been confined to a wheel chair at the beginning because of ataxia and spasticity, one year later he felt very well, was able to walk quite well and to do some of his farm work. He still, however, presented enough objective evidence to warrant a diagnosis of subacute combined degeneration. The anemia in this case was never marked, a point which tends to refute the often asserted statement that improvement in the nervous system is due to improvement in the blood and general condition of the patient.

As has been pointed out, many cases of pernicious anemia are encountered in which the anemia is mild while the neurologic signs are outstanding. These patients probably receive the most inadequate treatment because the physician has used the blood condition as an index to treatment. Consideration of the response of this particular group of patients to therapy would be an interesting problem.

Whether or not desiccated swine's stomach will prove more or less effective in the relief of nervous symptoms remains to be seen. The author has in mind a patient with severe pernicious anemia who responded in the usual manner to liver extract for two years, then became refractory to this form of therapy. He was then treated with desiccated swine's stomach and the blood condition once more responded satisfactorily. The only signs of involvement of the nervous system which he showed, namely paresthesias of his hands and feet, remained unchanged.

SUMMARY AND CONCLUSION

1. Some of the recent thoughts concerning the etiology of pernicious anemia are reviewed.

2. Familial achlorhydria and its relation to pernicious anemia is discussed.

3. Because of the remarkable improvement in the neurologic phenomena in many patients with pernicious anemia and subacute combined degeneration when adequately treated, it is desired to

stress the importance of a diligent attempt to leave nothing undone in the management of such patients.

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THE "NERVOUS" CHILD*

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In this generation the child has become the center of attention. If there ever was a time when children lived up to the old adage of "being seen and not heard" it has become ancient history. Modern inventions and an industrial age have

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wrought transitions in the American home and family life that seem inevitable. Some of these changes are beneficial, others are of much more doubtful value. It requires foresight and alertness on the part of parents to secure the advantages from them, rather than allow them to become a menace to family life.

The complicated situations in city life and the speeding up of our daily routine have a greater effect on sensitive and plastic, young, growing organisms than they do on adults whose constitutions are more or less fixed.

Children's problems are now engaging workers in many fields, some viewing them from the standpoint of the home, others from the educational, or industrial aspect. The church, and experts in public health and community welfare are actively alive to them. Perhaps nothing could have given a more wholesome momentum to the whole child welfare movement at this time than the White House Conference. We feel that much progress lies just ahead in the promotion of the mental health of children, since so much has already been accomplished for their physical development.

However, in spite of all that these experts can accomplish by their united endeavors in their various fields, the chief responsibility will still rest within the home. You, then, the family physician, will need to assist the parents to select wisely what is sane and dependable from the many ideas that are reaching them through the press, by radio, at the club, and "over the back fence."

The fascination of some of the discoveries of modern science leads some physicians to rely upon them too exclusively in treating mental illness. The doctrines of Freud and recent psychologic methods should not be allowed to supplant our study of human behavior under the guidance of the good common sense with which we were born.

The subject chosen for discussion, "The Nervous Child," is an all-inclusive term applied by parents, teachers, social workers and even the medical profession, to children who fail to meet the requirements of life, and stand out from the group. The word "nervous" is a most respectable term, acceptable to parents for all types of behavior for which the physician can discover no cause; or for which the parents are unwilling to recognize a more specific term. The nervousness may manifest itself in such habits as thumb sucking, nail biting, restlessness, night terrors or enuresis. It may take the form of poor habits of eating and sleeping, speech defects, habit spasms; but we also find the more serious conditions of severe mental retardation, epilepsy, post-traumatic and post-encephalitic states, and even various

kinds of delinquent conduct spoken of merely as nervousness.

In a very real sense a young child can be said to "mirror" the home situation, so when some of these problems confront us, we at once begin to question whether the child's difficulty arises because of the "stuff" of which he is made, and whether we are dealing with defective endowment; or whether an inadequate or bad environment causes the reactions. This is a very pertinent question, but in most of the cases neither heredity nor environment has been wholly to blame. A tendency to instability may be inherited, but it is nurtured to a full-blown neurotic condition, or shows itself as delinquent conduct, due to inefficient and erratic training. Frequently a most demoralizing home environment is created by the same emotionally unstable and uncontrolled parents to whom the child owes his neuropathic constitution. In addition to the precipitating cause of the difficulty, we expect to find several contributing factors which need to be evaluated.

Since a modern health program forces us to think in terms of a completely integrated personality, we find that health and well-being require not only good functioning of all the internal mechanisms—cardiac, digestive, eliminative, respiratory, and nervous systems; but of equal importance is a satisfactory adjustment of the various external relations,—social, domestic, industrial and religious. For this reason we emphasize the study of the whole child, examining carefully the physical equipment, the mental endowment, and the personality make-up, since all these together constitute the organism with which we have to deal. Of no less importance is our survey of the environment, the soil in which the individual is growing, to see that it is adequate to give this particular organism its best possible chance of development. A reasonably stable constitution can apparently withstand a surprising number of environmental strains and insults without permanent damage. A moderately unstable constitution may become more stable by wise and understanding rearing, with adaptation to the particular needs of the child. Healy's book, "Reconstructing Behavior in Youth," describes some interesting results of carefully guided foster home care of unstable and delinquent children.

The custom in the past has been to divide the responsibility for child development. The home looked after the body, the school cultivated the mind, and the church watched over the soul. The doctor was hastily summoned in extreme emergencies. When Willie suffered from this haphazard program, the blame for his shortcomings could always be attributed to an unfortunate inheritance

from some paternal ancestor who was not at hand to defend himself.

Since very few communities in Iowa boast of pediatricians, or school physicians, or child guidance clinics, it is your task to shoulder an additional burden. You have ushered Mary Ann into the world, and have tried to give her a fair start without physical handicaps. Can you be satisfied to leave her mental health to Providence and her inexperienced and doting parents? In days gone by the old-time family physician was able to treat Mary Ann's personality along with her stomach, as he was thoroughly familiar with the family stock, its weaknesses and peculiarities, and its capabilities. When he suspected that her aches and pains arose because she was "petering out" at school, he did not have the compulsory education law to contend with, but told her to quit school, and help her mother.

Now in our larger communities the demands on the human organism are much more complicated. Every child must be put through school at any cost. The departmental system of teaching is much more taxing to children with meager intellectual equipment, than the old country school system. The result of these strains is manifested in children by all sorts of symptoms and behavior deviations. Such misfortunes can only be avoided by careful tests of children's ability, so that they will not be subjected to strains they are unable to bear, for ambitious parents and overconscientious teachers are apt to demand too much. Every community needs at least one person who is prepared to determine children's intellectual equipment, since intelligence tests have now proved themselves of definite value. If the school does not offer these tests, some way should be found to make them available. Some suitable person in the community should be selected, who could, after brief training and experience, do this work. The Binet test should be considered as important in a school as the blood test is in a hospital. It occasionally makes the complete diagnosis of educational difficulties unaided, but usually is just one of the various factors to be considered in determining the resources of the child. After establishing the physical status, and the level of intelligence of a child, we want to know his performance ability, and his stability in socializing habits. We also search for special abilities, so useful in planning for the future; and disabilities, permanent or remediable, that must be taken into account in our recommendations.

The necessity for a most careful study of each individual case is evident, for frequently the same behavior deviation in two children is found to be due to entirely different causes, and, on the other hand, similar causes may result in altogether dif-

ferent reactions, even in two children of the same family, as you have often observed. An intolerable family situation may cause one child to withdraw into himself, and live mostly with his imaginings; a brother may respond to the same emotional strain by truancy or stealing. Some reactions are superficial and the cause is easily recognized. Others are much more complicated and the roots may be deeply buried in early experiences, and very difficult to expose. These are the cases that require careful study, by those who are experienced in unravelling such problems, before causes can be discovered and symptoms relieved. Thus there is no special reason to classify children's difficulties into groups according to the prevailing symptoms. However, there are certain reaction patterns that so frequently appear, or are of such importance, that it will be worth while to consider some of them. The pictures will be more clear if they are illustrated by some of the cases I have recently seen.

Among the more frequent difficulties with which we have to deal is the seeming inability of certain children to adapt themselves biologically to social demands. The establishment of good habits of eating, sleeping and elimination is not an easy task, but if handled wisely, and at the proper age, these habits become satisfactorily adjusted in the normal child, and are not carried over into adult life, as a nucleus for neurotic symptoms. When there is the combination of a child with an unstable constitution, and an oversolicitous and emotional mother, these habits tend to become wrongly conditioned and emotionally overdetermined, so that re-education becomes a difficult matter.

Margaret, who is seven and a half years old, has always had enuresis. She also is subject to night terrors and is at all times tense and apprehensive. She is somewhat retarded mentally, but she is much more handicapped by her poor emotional control. She is infantile and dependent in all her contacts. Not much can be done in re-education without a change in her mother's attitude and habit of spoiling her, unless she is transplanted to a neutral environment where she can be trained in self-reliance rather than treated as a baby.

Walter, a boy of nearly five, is very finicky about his food. He threatens to vomit if forced to eat, and throws himself on the floor in a fit of temper, becoming so noisy that his mother soon gives in to him rather than disturb the neighbors. Some assistance to the mother in easing her own domestic strains has increased her patience with Walter, so that she now gives him more consistent training.

According to Dr. Esther Loring Richards, of

the Johns Hopkins Clinic, one of the chief causes of maladjustment in children is the propensity of parents to expect more of their offspring than they are capable of accomplishing. They also are prone to instill into their children desires and ambitions often far beyond their capacity for achievement. This discrepancy between desire and means of fulfillment may become apparent to the boy or girl while in school, or not until he obtains his first position. It is likely to become the cause of much disappointment, leading at times to neuroses and psychoses. The individual may never become able to rightly estimate his own ability, and continue to be a misfit through life, changing from one job to another, finally becoming a chronic dependent, or resorting to dishonest practices to earn a livelihood. Such persons cannot bring themselves to do the type of work that is within their range and grasp.

Alfred is a chronic truant. His mother takes him to school twice a day, and he is kept in at recess to prevent his running away. Alfred has taken some money from home, and when sent on an errand by a neighbor he went to a movie instead of returning with the change. In spite of the vigilance of the mother this boy cannot keep up with his class because he is three years retarded, and at ten has a mental age of only seven. Kept in at recess he is deprived of the only activity he could carry on with boys his own age. An opportunity class will give him work he is able to do, and which he will enjoy. The task of teaching his mother not to expect too much of him will not be so easy.

Overstimulation may result in habit spasms or stammering, and all attempts to treat these symptoms are futile, unless strain is removed. George comes for examination because he makes no progress at school, though he tries very hard. We notice a throwing of the head to one side as he talks. He is a member of a successful and ambitious family, so he is following in the footsteps of his brothers and studying French, Latin, and higher mathematics. The Binet test gives this seventeen year old boy a mental age of twelve years. He has been advised to stop school and find a job for which he is adapted. His habit spasm will gradually diminish if he is not forced into other tense situations.

Charles, a boy of ten, stammers and jerks his head. He is very nervous, and has a pain in his shoulder when the teacher speaks to him. He has headache and pain around the heart. He is struggling with fourth grade work with a basal age of only six. He needs a tonsillectomy and school adjustment.

Normal children often may have little habits of counting pickets in a fence, stepping over cracks, or arranging their clothing in a certain way. In certain cases these set forms of behavior become firmly established and are recognized as obsessions and compulsions, when they interfere greatly with normal activities.

Robert, a nice looking lad of ten years, comes with the story that he has always been timid and afraid of the dark. He locks and relocks doors, looks under the bed half a dozen times at night, spends a long time scrubbing his hands, puts iodine on every scratch, and worries when his dog licks his face. He will not join the Boy Scouts because he is afraid of the water and could not learn to swim. A number of these fears are acquired from his mother, others are developed from what he sees at the movies. Though there seems to be very little "obsessive fixation" as yet, this is a boy with a neuropathic constitution, and he needs group activity with the "Scouts" or a Y. M. C. A. club to give the real boy, who lies underneath, a chance to be released.

A much more serious example of the same type of reaction is seen in Rebecca, a Jewish girl of thirteen. She was referred from the eye clinic. She had an ingrowing eyelash and feared she was going blind. She had seen a blind man and she could not be reassured. At six, she had complained of a hair in her throat. At eight she had numerical obsessions. She would touch a fence four times, and put on her clothes four times, in order to feel comfortable. The number two meant "good," four meant "God forgives." At eleven she stayed by herself, and developed queer ideas, such as saying that she saw "an enlarged head of her sister floating in the air." She now gets in a panic, if for a moment she cannot think where she is. She analyzes her every sensation, and has screaming spells, when she thinks that she is losing her mind. These obsessions occur in a much more unstable constitution than in Robert, and though Rebecca was seen at an early age, no treatment has prevented the development of the process which has now become so deeply seated.

A most common response of the unstable child is the invalid reaction, which presents in a rudimentary form the picture so often found in your waiting room. The symptoms may have started with an illness, during which the child received much attention, and the habit of profiting by complaint was established. In other instances the symptoms are unconsciously patterned after the mother's complaints, or those of some other person with whom the child is often in contact. Retarded children usually are quite suggestible and imitative, and quick to pick up the habits of others. A pre-co-

cious child soon senses the advantages to be derived by those having aches and pains in having special attentions, and avoiding unpleasant tasks. Such cartoonists as Briggs see the point, and picture a boy with a sudden pain in his stomach on the first day of school. When cause and effect are not so obvious, the eager therapist is too apt to reach for a bottle of cascara, unmindful that he must treat Willie's personality along with his stomach.

Hypochondriacal symptoms may be an unconscious protest of the organism against emotional or intellectual strain. Then the organ that happens to be involved is said to "speak for the child," calling attention to the fact that something is wrong. Instead of giving Willie a tonic and telling his mother to "keep him home till his nerves quiet down" or operating on his appendix, we must look for the real cause of the signal of distress.

Harold is brought to us at the age of seven by his mother. He has had attacks of nausea and vomiting since he was four. He is sensitive, restless, excitable, and easily exhausted. Since he must urinate every ten minutes he cannot go to school, so he has a private tutor. The history shows that Harold is being forced at meals by his mother, pushed in school by his tutor, and that he also takes lessons in piano and violin. His few spare moments are spent in playing chess with a moody and excitable father. The early emphasis upon food has given the stomach a leading rôle in the protest of this little child against the program of his overly ambitious parents, with their substitution of more mature interests for the natural activities of a boy of seven.

Alice, a girl of thirteen, has been confined to her bed for some weeks with heart trouble. She was in good health until two years ago, when she began to complain of a smothering and choking feeling, and pain around her heart, with frequent night terrors. At times there are panics, with dilated pupils, shortness of breath, and a fear of death. About three years ago she was in an accident and was in bed for a week. She overheard the doctor say that "one of the valves leading to her heart was strained," and something about "auriculo-ventricular disease." An unstable and suggestible constitution did the rest. A thorough physical examination at present gives no evidence of heart involvement. This was carefully explained to Alice and her mother, and a gradually increasing program of activities was outlined and will be carried out, with a later return to school. Thus we find the beginnings of both hypochondriacal and anxiety states in children. It is of first importance to learn the origin of the symp-

toms, but of equal moment is the attitude of their elders to them when they appear. After the physical condition is treated the symptoms should be disregarded; if nothing is gained by them, complaints soon disappear.

Among the more serious reaction types is that of the sensitive, conscientious child who is overly ambitious, but unable to mingle easily with others. He is easy to manage at home and at school, and so is apt to pass without comment or special notice. He seems unable to take any rebuffs, and tends to withdraw more and more from social contacts and difficult situations, taking refuge in imaginings that are satisfying, and offer no chance for disappointment or failure. When he approaches adolescence and feels forced to attend social engagements, or tries to enter the industrial world, he is totally unprepared. This causes failure, and further withdrawing into his imagination, until there may be a permanent break with reality, and the development of a frank psychosis of the schizophrenic or dementia praecox type. It is still a question how much can be done to avert such a termination; at least some of the more mildly introverted persons can be helped to a better understanding of the desirability of more adequate social relations.

Florence, at the age of eleven, began to reject all food, refused to move or speak, and appeared completely indifferent to her surroundings. She is the daughter of a jealous, emotionally uncontrolled, and neurotic mother. Besides inheriting an unstable constitution, Florence has had all her emotional energy drained by her mother, so that she has been unable to adjust to this conflict of personalities, and has regressed to an infantile level of behavior. An older sister, who must inherit more of her father's stability, has not been affected by the home situation. After weeks of careful management in a neutral environment, Florence has begun to eat again, and walks around, talks a little, and generally responds to the carefully selected experiences in her sheltered surroundings. The future outlook is not good, however, if she must return to her home.

We have still to mention the predominantly organic reactions, such as post-traumatic conditions, and post-encephalitic states. Sometimes much can be expected in the way of restoration in these cases; at other times very little change occurs, or the course is progressively worse. Much relief is experienced here, as well as in the more functional types, from lifting environmental strains, and adapting situations to the condition and ability of the child. These children cannot stand excitement, and if able to attend school should never be pushed, or allowed to take part

in competitive tests. They must be sheltered at home and at play, and kept from fatigue.

Henry came to us with the complaint of great restlessness, and a marked change of behavior following a brief illness two years ago. At that time he had "a slight upset of the stomach," with headache and a little fever and vomiting. He also complained of seeing double. Since the illness he has been a very restless sleeper. He cannot be quiet in school, speaks any time he chooses, persists in walking around the room, and creates a serious problem. His intelligence, however, is very superior. His mental age is twelve years and six months, and the chronological age nine years and five months. In the usual school system a good adjustment for such a boy is impossible and tutoring with careful attention to fatigue is recommended.

Andrew gives the history of "influenza" a year ago, at the age of eight. He slept all one day and had a high temperature. After this brief illness the parents noticed that the boy quickly grew tired in walking. He was apt to fall asleep anywhere, in the automobile, in school, or at the table while eating. Andrew showed increased irritability, and was often in a rage when he first woke up. He was very restless at night and talked in his sleep. An unusual increase in weight occurred, but no mental retardation was found with the Binet test. The symptoms abated somewhat after supervision of hygienic measures and regulation of his daily routine.

These two cases are brought to your attention because they present a marked change of behavior following an illness so slight that no importance was attributed to it at the time. Only from the after-effects could a diagnosis of encephalitis be made.

The abrupt change of personality, with increased fatiguability, irritability, difficulty of attention, and sudden outbursts of temper, are also characteristics of post-traumatic conditions. In this age of automobile accidents you are all familiar with these states, with their varying degree of recuperation, so no illustrations will be given.

In conclusion we must agree that the term "nervous child" has been used to designate any condition or malfunctioning of children that cannot be diagnosed as one of the recognizable somatic or visceral diseases.

The symptoms or behavior of a child are usually due to several contributing causes, with a varying degree of constitutional and environmental components.

A study of the whole child, including his phy-

sical, mental, and personality endowment, and his background is essential to discover the real causes of the maladjustment.

Both physical symptoms and anti-social behavior may be due to psychogenic causes.

Constructive treatment deals with causes and not symptoms.

After correcting all physical handicaps that are remediable, the treatment of personality and behavior problems consists largely in adjusting the environment to the needs of the child together with reeducation of the child in more useful habits and attitudes toward society.

When the cause of the condition cannot be corrected, as in organic conditions, the cultivation of all available resources of the child may be of great assistance.

You, as physicians, can help the parents, the school, and the community to understand the mental health problems of the normal, as well as of the unstable and delinquent boys and girls, in addition to your responsibility of safeguarding their physical welfare.

THE MODIFIED BARRAQUER CATARACT OPERATION*

OTIS WOLFE, M.D., Marshalltown

The intracapsular extraction of cataract by some technic is slowly but surely becoming the operation of choice among ophthalmic surgeons. They recognize the dangers attendant upon retained capsule and lens debris. I have observed this to be true particularly among the European surgeons. In Paris, Bailliart does an intracapsular operation with a Snellen loop and demonstrates some excellent results. Kalt uses the forceps extraction technic that bears his name. I have watched a number of entirely satisfactory cases. Stanculeanu was one of the earliest advocates of the forceps extraction. Poullard does a capsulotomy and then removes the debris and capsule with a Teall suction apparatus. Elschnig of Prague, who is conceded to be one of the most skillful operators in Europe, does a combined forceps and expression operation. In Edinburgh, some sort of an intracapsular operation is the standard.

A visit to Barraquer's Clinic at Barcelona, demonstrates a technic and results that are most convincing. J. E. Weeks¹ after visiting there, said, "The results observed left little to be desired." When in Barcelona recently, I met William J. Harrison of Philadelphia who holds a fellowship from Jefferson Medical College for the study of cataract.

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Harrison has spent considerable time with Barraquer and he told me he was most enthusiastic over the technic and results.

Even those who do not perform the intracapsular operation are frank in admitting the value of the results obtained. G. F. Alexander, before the Fiftieth Annual Congress of the Ophthalmological Society of the United Kingdom in a paper entitled "Discission of After Cataract," said, "While I do not myself perform the intracapsular operation, I recognize the fact that those surgeons who must deal with retained capsule are doing a second best method of cataract operation." Alexander says that discission with the knife often causes disorganization of the vitreous and the filtration of aqueous into the vitreous with a subsequent inflammatory reaction.

In this country, the Knapp-Torok forceps operation has established its positive value in ophthalmic surgery. Knapp's skilled technic² is most admirable and his arguments in favor of the intracapsular method are epoch-making. Edward Jackson's editorial comment³ on Knapp's statistics should be read by all. A. S. and L. D. Green⁴ have proved the merits of their modification of the Barraquer eresiphake technic.

The Barraquer eresiphake consists of a suction cup curved to fit the contour of the anterior surface of the lens, the vacuum being supplied by a motor-driven vacuum pump and controlled by a valve in the handle of the cannula. Connection between the pump and the cannula is made by a rubber tube.

The original forceps technics attempted to grasp the capsule and lift out the lens. The original Barraquer eresiphake technic consisted of allowing the cup tip of the cannula to grasp the capsule by means of suction and lift it out. The mechanics of these two technics are essentially the same, in that the lens is lifted out after the suspensory ligament is ruptured. If the capsule were always tough and the zonule friable, it would be ideal for either the forceps or the eresiphake and probably no expression would be necessary.

It soon became apparent, however, that the lift alone was not sufficient except in a small number of cases. It was found necessary to combine a certain amount of expression with both the forceps and the eresiphake technics. By so doing, the field of usefulness was greatly enlarged but the only valid criticism of the Barraquer method is associated with this phase of the technic, that is, the expression may cause vitreous to appear. The teeth or blunt blades of any of the capsule forceps are more apt to rupture or tear the capsule than the eresiphake. This is the strongest argument in favor of the eresiphake and is especially true for

swollen lenses. They are very difficult to grasp with the forceps but the cup of the eresiphake attaches to the capsule and holds it readily. Further, Barraquer contends that with his instrument, vibrations in the intensity of the vacuum assist or, perhaps, play the larger part in dislocating the lens, thus putting less prolonged stress on the capsule. If the eresiphake tears the capsule, most of the anterior capsule will be extracted and the cataract can then be expressed exactly as if a good capsulotomy had been performed intentionally. This also applies to the forceps technics.

The eresiphake method was first described by Hulén in 1910 but was popularized by Barraquer. A. S. and L. D. Green⁵ modified the technic and apparatus and combined expression with it. I observed that Barraquer now uses more or less expression with his cases. In a few instances, the lens was lifted out with little or no expression.

I presented my technic and arguments in favor of the Barraquer-Green operation before the eye section of the Iowa State Society⁶ in May, 1925, and another article dealing with its advantages in soft cataract in 1927.⁷ The technic I am now presenting is a modification of the technics of Barraquer and Green.

PREPARATION OF PATIENT

Focal infections are carefully searched for and eliminated when found. Blood sugar and blood urea are determined and both reduced if high. Elimination is raised as high as possible. Tension is taken and if above 28 m.m., operation is deferred and treatment instituted or a preliminary iridectomy performed. Cultures are taken from the lids. Silvol or argyrol and bichlorid ointment 1-3000 are instilled every one or two hours for at least twenty-four hours previous to the operation. Bromides or other sedatives are given the night previous and immediately before the operation. Care is taken to calm the patient and to teach him deliberate and easy closing of the eyes. He is impressed with the fact that the operation is to be painless and should he feel pain, he is to calmly notify the operator and everything will be stopped and more anesthetic used. The morale of the patient is most important. Nothing is more desirable to the surgeon than a placid patient.

TECHNIC

I will first state that cataract extraction by phaco-eresis is an operation requiring the most exacting technic. Smith says, "The intracapsular operation is a specialty within a specialty." This is particularly true of phaco-eresis. The end, however, justifies the means.

Exact technic is accomplished in our practice by

having a cataract operating team of five members with each member trained to care for certain details. Highly skilled and trained assistance is absolutely necessary. The operator himself tests and checks the apparatus. The first assistant controls the lids, watches the sutures and performs other steps without instruction. It is absolutely essential that he do certain steps without delay or direction. The same nurses assist each time and are familiar with every step of the operation. One assistant stands behind the operator, hands and takes the eresiphake out of his hand and controls the foot valve. The instrument nurse wears gloves and care is taken not to touch the part of the instruments entering the eye. A preliminary iridectomy is performed, in many cases a week or ten days

pleased to have them both state that they considered preliminary iridectomy highly desirable in any type of cataract surgery and that the additional time required was amply justified.

The operation is performed on the same cart that brings the patient to the operating room. A canvas stretcher is placed under him beforehand and he is removed to his bed by means of this stretcher. The face and brow are cleansed. Cocain, five per cent, is instilled and the lids injected with two per cent novocain. The speculum is introduced and if the eye is small or deep seated, a full canthotomy is performed. A few drops of one-half per cent cocain is injected under the superior rectus and a heavy control suture inserted, as described by McReynolds.⁸ I agree with him fully as to its value.

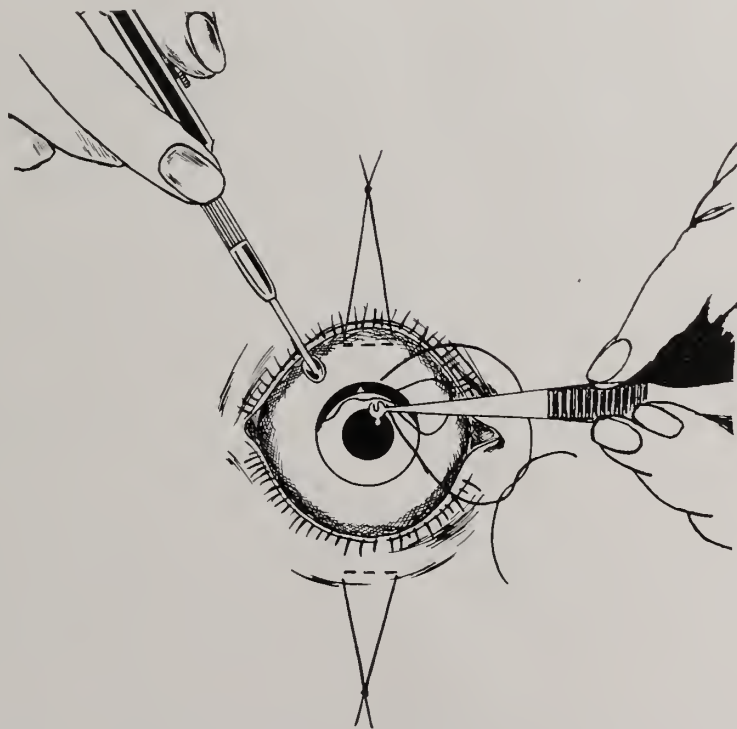


Fig. 1. Corneal section grasped by author's forceps, turned back, cannula (eresiphake) placed on lens by direct view. After it attaches to capsule, the forceps is transferred to lower limbus. Ball tip makes counter pressure.

before the operation. The pupil must be kept well dilated so that synechiae do not form. It is much easier to make a good incision and a broad conjunctival flap where a large preliminary iridectomy has been performed. The knife then never engages the iris at the upper angle, even if the anterior chamber is shallow. Wide dilatation is often not obtained in elderly people with cataract.

The arguments for preliminary iridectomy have been presented in my previous papers. I believe it to be very important. In a recent conversation with Colonel Elliott and Dr. de Schweinitz, I was

With the suture placed high up, a lid hook is not necessary for the upper lid, and the lower lid is controlled by the thumb of the assistant or by a stitch. It is absolutely necessary to make a full one-half section of the cornea. The knife should enter and emerge at the limbus, come out in the sclera above and leave a large conjunctival flap. One or two drops of five per cent cocain are injected into the anterior chamber. If the iridectomy has not been performed, it can be done at this time. I use Barraquer's modification of the De Wecker scissors. A suture of fine Kalt silk in a Barraquer

needle is placed through and through with a loop of about three-fourths of an inch laid to one side in the eye. The ends of the suture are tied and laid to one side so they can be quickly picked up. The speculum is then removed.

The second assistant hands the cannula to the operator over the right shoulder and watches the tubing to see that it does not bind or pull. He also takes it from the operator's hand without further instruction after the cataract is removed. The ball tip forceps,⁹ described before the American Academy of Ophthalmology and Otolaryngology at the 1928 meeting, is held in the left hand throughout the operation. The corneal section is grasped with the forceps and turned back (Figure 1). The cannula is placed directly on the capsule by direct view and not watched through the cornea. By so doing, there is no excuse for catching the iris margins. If the pupil has not responded well to dilatation, a smaller cannula is used. The large cannula is preferable and it is much easier to use where a preliminary iridectomy has been performed. There is less blood in the anterior chamber and the detail is much better.

The operator wears a Beebe loupe and the attachment can be observed accurately as the vacuum is applied. One of the assistants reads aloud the amount of vacuum attained. It is varied for different cases. Barraquer uses 55 m.m. Hg. for soft cataracts and 58 m.m. for the others. The cannula is then rocked gently from side to side a few times to rupture the suspensory ligament. This rocking also does away with the temporary vacuum produced behind the lens which would tend to lift the vitreous as well. The corneal section is then released by the forceps and they are transferred to the globe. The ball tip makes counter pressure at the limbus. The amount must be varied to suit the case. As a rule, the younger or better developed patients require considerable pressure. When expression is first applied, it may be alternately pressed and relaxed but once the lens starts to dislocate from the patellar fossa, it should be firmly followed, as in the Smith technic. If too much lift is made on the cannula without counter pressure, the capsule will rupture, but seldom before it starts through the wound. When it does this, the capsule and lens debris deliver so that they seldom require any attention whatever. It accomplishes the same result as an intracapsular extraction. When the proper amount of expression and lift are combined, the lens will usually appear upper border first and then be lifted out by the cannula without further pressure by the forceps. Occasionally, the additional lift with less expression causes the eresiphake to lose its hold

on the capsule before delivery is complete. If so, the first assistant has a Fisher needle ready and assists the lens through the wound. This is more desirable than following the lens with too much expression.

If the capsule ruptures, the use of the eresiphake is immediately discontinued and the lens is expressed by counter pressure exactly as in the capsulotomy method. A modified Snellen loop is used if vitreous appears or if the zonule is ruptured before delivery by expression is started. When the pupil is widely dilated and the cannula can be placed well down on the lens, it can be tumbled advantageously, as advocated by Cruickshank.¹⁰

The suture is quickly pulled taut and cut, and the eye immediately closed for ten to fifteen minutes. This is a very important step. Too much zeal or toilet at this stage may be very harmful. If a bead of vitreous appears, it will usually drop back. Vitreous does not run out. It is pressed out either by the surgeon or the patient. If the lens has been removed in the capsule, no toilet is necessary except smoothing out the conjunctival flap, after the ten or fifteen minutes have elapsed, and instilling the bichlorid ointment.

Barraquer does a marginal iridectomy after the extraction to prevent iris prolapse. If a large iridectomy is done previous to extraction, no iris prolapse can occur.

I illustrated before the American Academy of Ophthalmology and Otolaryngology in 1930 a variation in technic that we have used in obstreperous patients or in those who cannot lie on their backs longer than a very few hours or in cataract with glaucoma. The first step in the operation is to dissect a large circular conjunctival flap from above and on the sides. Two sutures are placed on the sides. They are held up alternately like a tent by the assistant, while the incision is made underneath them. The threads are not in the operator's way as a forceps would be. The knife comes out above in the sclera in direct view as the flap is held back. The needles are left on the thread of the lateral sutures and laid to one side. One central stitch is placed as in the original operation. The balance of the technic is as above described. The lateral sutures are then passed through the bulbar conjunctiva above and tied, making a complete closure of the wound. Patients can sit up in bed in two to four hours. One very heavy patient with severe cardiac asthma who had a terrific cough whenever she lay on her back was kept reclining only three hours and obtained a good result.

Where glaucoma exists with cataract, external filtration can be established by removing a piece of sclera with the Holth punch underneath the flap

before the lateral sutures are closed. If this is done, a water-tight suture or additional sutures are placed.

The eyes are left undisturbed for forty-eight hours and then inspected and treated with bichlorid ointment. Occasionally we inspect them in twenty-four to thirty-six hours. When they have been inspected for some source of discomfort a few hours after the operation, we usually have found the anterior chamber reformed with a clear, black

tative refractions on the seventh day, with two, on the eighth day and with several on the tenth day, and many have been given glasses to wear on the fourteenth day.

There is no lens substance or capsule to absorb or to set up a secondary inflammation. Postoperative iritis has been conspicuous by its absence. Secondary infection is less likely to occur. There is no danger of a secondary membrane or cataract forming to obstruct vision.

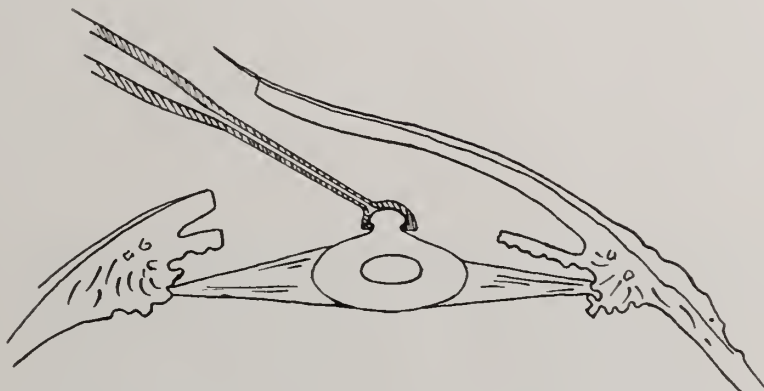


Fig. 2. (Schematic) Cannula in anterior chamber placed evenly on lens capsule. Iridectomy above.

pupil. The unoperated eye is left uncovered after the third day. Patients can usually be up in a chair on the fourth or fifth day.

Where this conjunctival flap technic is used, patients can be up after a couple of hours or the next day at most. This is a distinct advantage in elderly people. They do not stand being bedridden and it is well to get them out as early as possible.

At the end of a week, the operated eye can be left uncovered part of the time. The rapidity with which the eye clears up is very noticeable. Redness and operative hyperemia usually are absent after a week or ten days. Some cases have cleared so rapidly that with two patients, we have done ten-

Figures II and III are schematic illustrations of the action of the eresiphake on the cataractous lens.

COMMENT

It is true that with this or any other intracapsular method, there is more chance of a bead of vitreous appearing or of some vitreous loss than with a capsulotomy in which the surgeon is content simply to deliver the solid nucleus, leaving the debris and capsule to absorb. In this case, postoperative complications, such as iritis, uveitis, or secondary glaucoma are likely to occur, as shown by Knapp's statistics,¹¹ and frequently one or more needling operations must subsequently be performed.

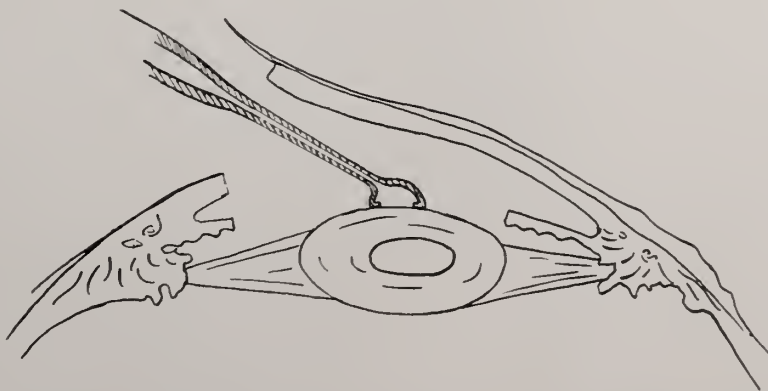


Fig. 3. (Schematic) Lens and capsule moulded into cup of cannula and held as with forceps.

If the surgeon attempts to remove the remaining cortex or capsule, either by irrigation or by forceps, as most of them do, he is just as apt to have vitreous loss as in a careful intracapsular method. H. W. Woodruff¹² said in discussing the paper of Lloyd Mills dealing with the complications of cataract surgery, "It would have been better to have performed the Barraquer operation." The patient has a chance at something nearer the ideal at no additional risk.

Colonel Elliott¹³ advises that patients should not defer cataract operation on one eye because the other eye still has vision. His arguments are excellent and well taken:

"1. To blind one side exposes a man to injury. He runs into people and objects; moving objects run into him, and so forth.

hope and courage high; far more depends on this than many surgeons realize. In any case the patient must spend long hours with his eyes bandaged, wondering what the future holds for him, never ceasing to think, while ever trying to pierce the mists of the future. If both eyes are blind or nearly so, his fears are intensified, for all his future depends on the result of the operation. Before his mind there hovers unceasingly the nightmare possibility that in the event of failure he will never see again. In all our tongue are there any words more dreadful than 'never again'? If, on the other hand, he still has some sight in the better eye, he knows that he will at least have the sight he had in the better eye before the operation; this lends him courage and calmness in his hour of trial. As he broods over the possibility of a failure in the

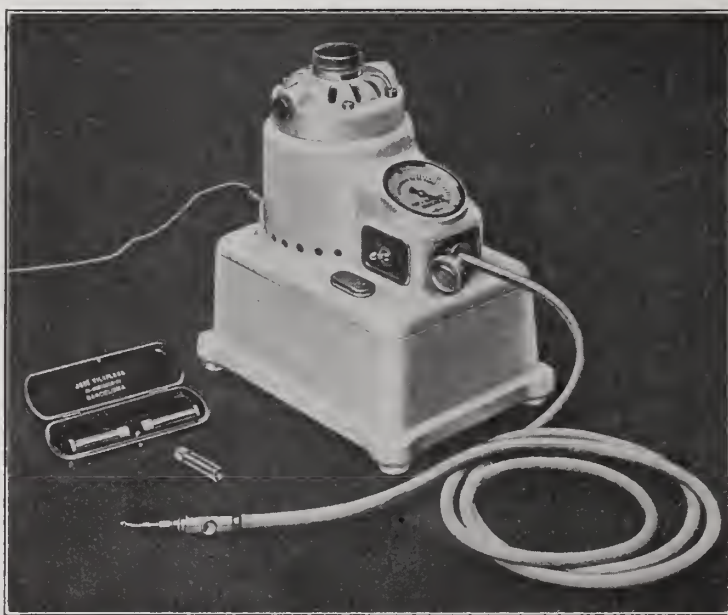


Fig. 4. The Barraquer Eresiphake.

"2. The younger the patient, the better his resistance to diseases that might prevent operation. He is a better subject at seventy than at seventy-one. If the operation is deferred, the opportunity to do a successful operation may thus be lost never to return.

"3. No patient should be allowed to go blind and to drop his normal activities before having the cataract removed. With modern methods any lens can be removed no matter how immature.

"4. There are many dangers in allowing the cataract to become overripe or hypermature.

"5. With regard to the factor of morale in cataract extraction, it is most important that a patient should enter the ordeal of an extraction with his

surgeon's efforts, his anxiety is at least tempered by the comforting reflection that in any case he still has the better eye to fall back on. I look on this as a factor of great importance, and my own personal choice is always to operate if possible while the second eye is still useful. This leads me on naturally to the question of operating upon the second eye.

"When a patient has a good result in one eye, is it advisable for him to have the other eye operated upon or not? I have no hesitation in replying that, unless there is some strong contra-indication, the extraction of the second cataract should be proceeded with at an early date. I will give my reasons for this opinion.

"The question of 'morale' just discussed comes in strongly here again, for, however good the result of an extraction may be, it is obvious that the sight of the operated eye may subsequently be lost in a variety of ways. Injury, retinal hemorrhage, glaucoma, and a host of other evils lie in wait for the old patient—and the cataract patient is almost invariably old. One cannot afford to take any risks where sight is concerned—it is too valuable; and therefore I urge every cataract patient to make his margin of safety as wide as possible and to have the second eye operated on at an early date, whilst the sight of the first is still good.

"Two eyes see better than one, just as two ears hear better than one, or the two sides of the nose smell more acutely than one. Having the second eye operated on usually materially improves the sight for near and far distances; it gives stereoscopic vision, and it greatly widens the visual field. A blind eye on one side is, as previously pointed out, a distinct danger to the patient."

The Barraquer-Green technic can be used in all uncomplicated types of cataract except where the lens is dislocated. We do not use it in young people. We prefer to do a discission and then remove it by the Teall method, as described by Dean.¹⁴

The advantages of the intracapsular methods over the old capsulotomy procedure are that "needlings" are seldom necessary, the stage of convalescence and disability is greatly lessened, better vision is obtained and it is not necessary to wait for the cataract to become ripe. In a recent conversation, de Schweinitz said that he considered this a very strong argument in favor of intracapsular extraction. The needling operation is dreaded just as much by the patient as the extraction, and the mental attitude of the patient is of much importance and must be considered. Most of the operations for cataract are performed on patients in the evening of life. Their mental activities and conceptions are such that they are not amenable to the logical reasoning of the surgeon. They are deeply disappointed and mentally depressed if they do not see when the dressings are removed or if further surgical procedures are necessary. In the past, ophthalmic surgeons have considered needlings and discissions as minor surgical procedures. We now know them to be difficult operations in many instances and the cause of serious disease in not infrequent cases, as shown by Peter,¹⁵ Hardy¹⁶ and others.

Our patients are all private ones and we have been able to keep in touch with most of them. We are disappointed if we do not get vision of 20/30 or better in uncomplicated cases and 20/15 is com-

mon. Our experience with phaco-erisis covers a seven-year period in which over two hundred fifty operations have been performed.

I wish to state emphatically that in no instance has vitreous loss ever occurred by suction. When a bead appeared or a drop or so was lost, it was as a result of the expression. It would have occurred with the combined forceps technic or any other intracapsular technic. It is always less apt to occur than with the Smith technic and if controlled as outlined, it need not be feared.

CONCLUSION

The cataract operation is one to restore function. The amount of visual function restored by operation can be measured. The technic that restores the greatest amount of function must be considered the operation of choice.

The argument against the Barraquer operation is that it is complicated and difficult. This argument is not sufficient as it can be used against any type of major ophthalmic surgery. The ends attained by the Barraquer operation justify the means.

Intracapsular extraction of cataract is conceded to be ideal. Attaching the capsule by means of vacuum (Barraquer technic) is the best way of grasping the capsule and removing it with its contents intact. Combining a certain amount of expression greatly enhances the scope of the technic and lessens the chances of operative complications.

The advantages of this method are: The lens is removed in its capsule with the avoidance of subsequent operations on secondary membranes that are left behind or that form following the extracapsular extraction. Secondary infection, iritis and glaucoma are less likely to occur. Operative hyperemia clears rapidly and the convalescence is rapid. The percentage of good visual results is higher than that of the extracapsular method.

It is not necessary to wait for "ripening" of the cataract. The Barraquer operation can be done at any time.

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Discussion

Dr. C. W. Rutherford, Iowa City: Phaco-eresis, as performed by Barraquer, does not appeal to American surgeons; I do not know of any who use it without modification. My experience with this operation consists in having assisted Dr. W. F. Hughes of Indianapolis in several operations some years ago. He performed phaco-eresis twenty-eight times and feels that his most successful cases were done by this method. His apparatus sometimes failed to function and he changed to a forceps operation. He believes that more cataracts can be removed in their capsules with a reliable eresiphake than with forceps.

In order to emphasize the advantages of removing the cataract in its capsule I will summarize some of our observations in cataract surgery at the University hospital. Many details must be omitted because of the time limit set on discussions.

Success in any cataract operation depends upon such factors as (1) the selection of suitable cases; (2) the correct preparation of patients; (3) surgical technic and (4) postoperative care.

(1) A clinical history of the patient and his family may furnish information concerning hereditary dispositions and eye diseases that preceded the development of the patient's blindness. The eye is examined by the usual methods, and by slit-lamp for special studies of the cornea, iris and lens. Functional tests supply data for a prognosis. The lacrimal conduction apparatus is investigated; smears and cultures are taken from the conjunctival sac; blood is drawn for Wassermann and Kahn tests; dental, nasopharyngeal and pelvic examinations are made for foci of infection; blood chemistry studies and blood sugar estimations are made.

(2) Mercurochrome, 2 per cent solution, is used daily in the tear sac and conjunctival sac until time for operation. On the night before operation, and at one hour before the patient is sent to the surgery, twenty grains of sodium bromid and ten of chloral are given by rectum. The patient has a night's rest, he is quiet and tranquil during the surgical period and drilling is unnecessary. A mydriatic is used at the same time.

Anesthesia is effected by injecting one cubic centimeter of novocain solution among the palpebral branches of the seventh nerve, in the region of the parotid gland, to prevent squeezing of the lids; a drop or two is placed beneath the conjunctiva above the cornea to make the iridectomy painless; and one cubic centimeter is injected into the vicinity of the ciliary ganglion. This last seems to lower intra-ocular tension and so tends to prevent or minimize any loss of vitreous. The cornea is anesthetized with cocain. The conjunctival sac is sterilized.

(3) An ample section is made with a conjunctival flap and sutures are placed and looped, but not tied. Blood is not allowed to remain or clot in the anterior chamber. A peripheral iridectomy or an iridotomy is performed; this preserves a round, centrally placed pupil that can contract naturally. During the delivery of the lens an assistant, with speculum or lid

hook, holds the upper lid off the globe. No other special team work is required.

For intracapsular delivery the lens capsule is grasped in the lower zone of the pupillary area with a Kalt forceps. Movements designed to rupture the zonule below are made with the forceps, with or without the aid of a spoon gently and intermittently pressing inward at or below the lower limbus. After the zonule has ruptured the lens is drawn forward, rotated through the pupil and slowly lifted out of the eye. No counter pressure is made above. The conjunctival sutures are tied. The iris is adjusted by gently stroking the cornea with a spoon. The eye is dressed with White's ointment and a miotic.

(4) The patient is returned to his room and is lifted from the cart to his bed by a special stretcher. He is kept on his back for six to twenty-four hours and is not allowed to turn on the operated side for three days. The eye is dressed on the third, fourth or fifth day, and at that time mydriatics are begun. We usually use scopolamin.

Our results with the intracapsular method are encouraging. The conspicuous advantages are a clear black pupil and an intact iris sphincter.

BRAIN ABSCESS; QUESTION OF TREATMENT*

HENRY A. BENDER, M.D., Waterloo

A brain abscess, as we all know, may be found in various parts of the brain and therefore the treatment depends upon the location. Not many years ago, the diagnosis of a brain abscess practically meant a fatal outcome, but now we feel that there is hope for recovery, especially if the abscess is subcortical. However, if the abscess is located in another area of the brain, the prognosis is still very unfavorable. The etiology, diagnosis and localization of the brain abscess will not be discussed here; only the treatment of a subcortical abscess will be considered. Probably none of us has had many cases of brain abscess in his practice. Nevertheless, we have to keep them in mind more than any other branch of medicine because of their origin from mastoid and sinus infections, so it is hoped that a review of the treatment of a subcortical brain abscess will be of some benefit.

The success of the treatment of the abscess depends greatly upon the cause: if the abscess is due to a highly virulent organism which produces a rapid necrosis of the tissues and does not allow the infection to encapsulate, the treatment is usually unsuccessful; if the organism is a low-grade type, however, and allows a capsule to form, or if it is due to a gunshot, the success of the treatment is greater.

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Death occurring during the treatment of a sub-cortical abscess is generally not due to the abscess itself, but to a septic encephalitis or meningitis resulting from the trauma produced in the treatment, or from pus getting into the meninges in breaking down the wall of resistance, or from a rupture of the abscess into the ventricle.

According to C. C. Coleman, there are four recognized procedures for the relief of abscess of the brain:

1. Drainage through a small trephine or mastoid opening with a short incision in the dura and immediate or delayed insertion of the eye-end of a soft rubber catheter into the abscess cavity.

2. The osteoplastic flap exposure of the brain with drainage, as advocated by Eagleton.

3. The single or repeated tapping of the abscess without drainage, as recommended by Dandy.

4. The unroofing of the abscess, as proposed by King.

Other methods by Tobey and Cahill will be mentioned.

The simplest of these methods is the catheter drain as used by Coleman. After localization of the abscess, it is approached as directly as possible. Under local anesthesia, an incision of about two inches is made in the scalp, a small trephine opening made in the skull and the dura incised for a distance of about one inch. With a large ventricular needle covered by a cannula, a search is made for the abscess and if the latter is encapsulated, a sense of definite resistance is imparted when reached. When pus is obtained the needle is withdrawn and a small soft rubber catheter is inserted along the needle track into the cavity. If pus is obtained, the tube is left in place; if difficulty is experienced in placing the tube, it is withdrawn and the needle is reinserted and as much pus withdrawn as possible. The wound is closed and in about a week, a similar attempt is made. This may have to be tried several times before the tube is placed but if still unsuccessful, Dandy's method is used. However, if the tube is once placed, it remains in place until it is extruded by the collapsing brain tissue into the abscess cavity, which may take two to three months or longer. Trauma must be at a minimum.

Some have modified the above method by doing it as a two-step operation. The first step consists of opening the skull, turning back the dura and covering the brain with cotton for twenty-four hours, thus permitting a certain amount of walling off to take place. The second step is that of opening the brain and establishing the drainage. It is a question whether meningitis is lessened by the two-step operation.

Dr. Coleman has a series of twenty-six cases with twenty-two recoveries by this most simple method of draining the brain abscess with a rubber catheter.

The osteoplastic flap method, as advocated by Eagleton, will not be taken up as it is more an approach than a treatment.

Dandy's method of treating a brain abscess consists in tapping the cavity at intervals of one to two weeks. He believes that in an encapsulated abscess the brain needs only a relief of tension to enable it to overcome the infection. There is no drain introduced into the cavity.

King treats his brain abscess cases by unroofing the abscess, thereby doing away with all drains and allowing the cavity to completely herniate itself from the intracranial space through the opening made. It does away with any danger of the formation of secondary abscesses or further advance of an abscess. This treatment consists briefly in: (1) exact localization of the abscess with a cannula through the trephine opening; (2) enlarging the trephine opening to the size of the abscess and uncovering the abscess; (3) complete herniation of the cavity; (4) Dakinization of the area until the hernia is subsided, and (5) allowing epithelium to cover the area. This method is used to best advantage in abscesses very close to the cortex and those undergoing a rapid necrosis.

Besides the above four methods of procedure, Mosher's conical wire mesh drain surely has to be considered. The abscess cavity is exposed over its area and the cone is then placed in the cavity with the apex inward, the base being sewed into place in the scalp margins. It is felt that "the repair takes place on a herniation basis, due to the fact that the abscess cavity herniates against the brain in such a manner that the residual portion of the abscess cavity plasters itself against the drain and then herniates through the opening in which the drain was inserted, thus effecting a cure." The one disadvantage of the wire mesh is the trauma produced on removal, because of the brain tissue growing down into the mesh. For this reason, many are using a cone-shaped drain with gauze size screen openings or small perforations, allowing no herniation into the meshes, but keeping the drain in place until pus is drained out and then allowing the brain tissue to force out the drain.

Tobey recommends that the brain be uncovered by an electric needle and that a cone-shaped piece of the brain and cavity be burned out before the wire drain is inserted. This is done (1) to avoid hemorrhage, and (2) to avoid meningeal infection by sealing off the meninges through coagula-

tion. He then uses Mosher's cone drain, later supplementing it with tubes.

Others have methods of their own, modifications of the drains mentioned above; all with the purpose of maintaining drainage, keeping down pressure and not allowing secondary abscesses to form.

The after-treatment consists mainly of minimizing the trauma. Some keep the tube and cone clean, some irrigate the cavity with a solution, some use postural methods to increase the drainage and encourage herniation of the abscess wall.

The following is a case in which we tried several methods of simple drainage, the soft, eye-end rubber catheter giving the best results.

About June 1, 1930, W. W., aged twelve years, accidentally shot himself, severing part of the upper lobe of the right ear and several fingers of the right hand. At this time the family doctor sewed up the fingers and fixed the ear; the boy made an apparent recovery and returned to school. No x-ray was taken and no temperature record kept. Three weeks later (June 22, 1930) the lad was sent to us, very sick. His temperature was 103 degrees, he had severe headaches, was highly toxic and the right ear was discharging freely, though he had no cold. Examination showed some tenderness over the mastoid bone, some stiffness of the neck, and Kernig's sign was present.

The spinal fluid showed 220 cells, with 60 per cent polymorphonuclear cells. The x-ray showed the right mastoid cells hazy, with some breaking down of the walls. There were twelve shot in the scalp, with one lodged at the upper end of the mastoid next to the dural plate.

An operation was performed that same night. All mastoid cells were soft, necrotic and markedly decalcified. After all the cells were cleaned out, an attempt was made to find the bullet at the upper end of the mastoid bone. It was located in the bone with one-half of it through. When the bullet was dislodged, about one-half ounce of pus escaped. The bony opening was slightly enlarged. A small wick drain was inserted and the mastoid wound packed. In about two days the lad felt fine and all the meningeal irritation had disappeared. Four days after the operation his temperature was 99 degrees. Five days later the temperature again became elevated and by June 30 it reached 105 degrees daily but would come down to 99 or 100-101 degrees.

The dressings were changed daily and new gauze drain of various forms inserted. The latter, however, acted more as a plug than a drain, so the abscess cavity was drained daily by a probe and tapping method. The lad apparently was get-

ting along fine with less discharge daily, but the temperature was getting worse instead of abating. The boy was becoming nauseated and was losing ground. For twelve days his temperature was 105 degrees in the afternoon, falling to 97 to 100 degrees in the morning. The urine was negative on repeated examinations, the red blood count was 3,200,000, hemoglobin 67 per cent, white blood count 14,800. The blood culture was negative, and heart and lungs were also negative. The temperature was surely septic in type, but he did not appear that way; on the other hand, he had no symptoms of another brain abscess and on July 11 he was given some mercurochrome intravenously, with resulting temperature of 107 degrees next day which went down to 98 degrees by evening. Four days later, July 16, his temperature was 107.2 degrees and the boy appeared to be dying. On July 17, the area around the abscess was explored and a second abscess was found, which was as large as the first. A rubber dam drain was inserted. The patient did not seem to respond and on July 20 was given a blood transfusion. From then on he slowly gained ground, although his daily temperature still varied from 98 degrees to 104 or 105 degrees and he had chills. Beginning August 4, for the first time in over a month, his temperature remained normal for two days. During the meantime, the brain tissue had compressed the rubber dam drain and a gauze drain was again tried, but as before this acted as a plug. Next a perforated rubber tube was tried, but the granulations and brain tissue filled in the openings on the side, so finally a catheter with a single end opening was inserted and this solved the problem. It was removed a few times to clean out the pus. On August 10, the temperature stayed normal and on August 22, two months after the first operation, the tube had extruded itself and three days later the patient was discharged as well.

One month later, September 29, I was called to the hospital and here found my patient in almost the same condition as in June, but without meningeal symptoms. The mastoid wound was draining and on probing, it was discovered that a fistula led into the old brain abscess area and about one ounce of pus flowed out. The usual tube was inserted and the patient felt like going home the next day, but on the second day the headaches returned and he could get no relief, no matter how well the cavity was drained. On October 2, another exploration was made without anesthesia and a large abscess cavity was found well forward, filled with another ounce of pus. The rubber catheter was carried forward into this cavity and fastened to the skin. From then on the patient

improved daily and was allowed to go home on October 9, one week after the last opening. He was dressed daily at the office until the tube finally extruded itself again on October 31, four weeks after the last opening.

To date there has been no more trouble except for an otitis media in that ear in December, which fortunately did not stir up the brain abscess again. There are no after-effects whatever.

In conclusion, I wish to state that—

1. Brain abscesses (subcortical) now have a more favorable prognosis than formerly.

2. The soft, open-end, rubber catheter is the simplest type of drainage.

3. One must always look for secondary abscesses forming as the brain tissue fills in, in the rubber tube drainage treatment.

4. Uncapping the abscess, inserting a cone-shaped wire drain to allow a more equal filling in of the cavity and then supplementing with rubber drains seems the better way to handle the abscess and thus prevent secondary abscesses.

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Discussion

Dr. Jesse B. Naftzger, Sioux City: The splendid recovery of Dr. Bender's very serious case of brain abscess precludes any criticism of the treatment and I wish first to congratulate him upon his success.

The accepted lines of treatment as followed by operators of large experience have been described in detail by the essayist. We must not forget, however, that each case of brain abscess presents problems of its own and the case just described illustrates clearly the difficulties one may encounter.

Traumatic brain abscess presents a different picture from metastatic or adjacent abscess. In traumatic brain abscess, as Eagleton has said, there is a sudden death of brain tissue from the trauma before the tissue is prepared to combat the infection. In adjacent abscess the tissues have built up a resistance against the invading organism and the abscess may be more definitely walled off.

Much discussion has always arisen as to the proper time to drain a brain abscess. Many still feel that delay in operating gives a better chance of recovery, as the abscess will have developed a more definite wall; the organisms may not be quite so virulent and the tissues may have developed some immunity. Nevertheless, in spite of these arguments, we believe that a brain abscess should be drained as soon as a diagnosis can be made, because statistics show that the best results are obtained by this method of treatment. When an abscess is localized it should be opened by the most direct route; some advise a dural incision and some a puncture. Puncture is safer,

quicker and followed by fewer complications. After incision of the dura, unpleasant complications may follow because of the sudden relief of the fluid in the subarachnoid space and a hernia of the brain may also develop later.

Complete evacuation of the brain abscess when it is explored is the ideal treatment if possible. When pus is found a searcher or encephaloscope should be introduced before the pus all escapes and the cavity collapses. It is much easier to find the cavity and introduce a tube while the cavity is still distended with pus. The Gifford abscess searcher has proved quite satisfactory in locating an abscess and introducing the tube.

Dr. Bender's case is most interesting because of the multiple abscesses which developed and which were successfully drained, and particularly because of the different types of drainage used. The rubber catheter finally solved the problem and I feel that it is the logical form of drainage for the majority of brain abscesses. A large, deep brain abscess may require the uncapping operation of King. Gauze is not satisfactory as drainage except where it is sometimes used to pack a very large abscess cavity. Very little manipulation of the tube should be allowed, at least for several days, until a protective wall is formed around the tube. Providing the abscess cavity has been located with a trocar or brain searcher it is not always easy to introduce a rubber tube in the cavity and it may be necessary to introduce it through the brain searcher or a speculum.

As the tube is slowly extruded, particularly if much of a dural incision has been made, a hernia of the brain tissue may follow. We had one case with a hernia as large as an egg and it took several months for this to recede and become epidermized. The hernia should not be excised but should be covered with vaseline and rubber tissue and gentle pressure applied.

It is hard to tell whether multiple abscesses exist or if the other abscesses found are prolongations or diverticula, as it were, of the main abscess cavity. We had one case in which a number of abscesses were drained over several months but the patient eventually died from an apparent rupture into a ventricle.

One point should not be forgotten, that is that these abscess cavities may not entirely fill in with scar tissue but portions of the cavity may wall off forming a cyst which may become reinfected at a much later date. It is hard therefore to say that a brain abscess is ever positively cured.

Because of the high mortality of brain abscesses I again want to congratulate Dr. Bender upon the manner in which this case was handled.

Dr. Elmer P. Weih, Clinton: Dr. Bender has presented a very interesting and unusual case. I congratulate him upon the excellent result which he obtained.

The lesson to be learned from this discussion is the inadvisability of using gauze for drainage. Gauze usually acts as a plug and not as a drain. In our

mastoid work we use gauze to control hemorrhage, and remove it as soon as possible. It should not be used in draining a brain abscess, a rubber tube being much better.

During the World War we were taught, at Cushing's Head Hospital, to irrigate all our gunshot wounds of the brain, thus washing out hair, splinters of bone and destroyed brain tissue. We used a soft catheter and a syringe. I have wondered a number of times since whether, in case of a brain abscess that was walled off, the gentle irrigation of the abscess cavity through a rubber drainage tube with Dakin's solution would not be advisable.

Each case has its own indications and these must be met by the attending surgeon.

Case Report

ACTIVE MOTION IN THE TREATMENT OF FRACTURE OF THE PATELLA

J. NIEMACK, M.D., Charles City

In all fields of surgery the after-treatment has lately taken on an unusual importance. So it is with fracture treatment. A bulletin of the American College of Surgeons (March, 1931) is devoted exclusively to an outline, and a discussion of the principles, of this subject. This seems necessary, for the evidence given in damage suits, as well as the textbooks themselves show glaring defects and lack of agreement.

A textbook is not only for teaching the student and refreshing the memory of the medical practitioner; but it is also a standard expert witness in damage suits. As such its teaching should be clear, unmistakable and as nearly dogmatic as possible.

The following extracts are from Scudder: "after the second week daily active motion; barely 2 to 3 degrees." "Walk about with injured knee fixed after the second week." "At the expiration of eight or ten weeks active motion of the knee be cautiously allowed." "At the third or fourth week apply removable splint, allow walking with crutches and use daily active motion." This refers to patellar fracture. Did Scudder really mean to allow such ambiguities to go out into the world, or did the proof reader slip? Such incongruities are also found in other textbooks.

We need new textbooks because of the progress made in that special line, but it is surprising how extremely slow scientists are in applying to real life the consequences of well established principles. The bulletin mentioned above says in the very valuable Aphorisms, "Doctors and the public have been taught for ages to keep broken limbs at abso-

lute rest for many weeks," and again, "Voluntary active movement of joints contiguous to the fracture as early as possible without disturbing the fracture—is highly desirable." This reasoning is brought about by the recognition that it is satisfactory *function* rather than mere anatomic correction that we are after.

Half a century ago we learned that bone developed along the lines of stress and muscular action even in utero. (Wolf, in Berlin) "Inactivity, fixation, and so forth, cause atrophy, due to elimination of nerve impulses and muscular inactivity." (Steindler) *Passive* movements affect bone and joint surfaces, often injuring both. *Active* movements affect muscles and mind, usually strengthening both. *Guided* muscular contractions are of primary importance in causing bony union, provided motion of bone fragments is avoided. Early active movements will prevent the formation of periarticular adhesions and adhesions within the joints." (Aphorisms)

After what I have said about his textbook it is only right to state that the chairman of the board editing the Bulletin is the same Scudder. The fear of active voluntary motion combined with the realization of the need for motion to prevent stiffness and functional disturbance has brought us the mischief maker, "passive motion," but we must get rid of it. Active motion is physiologic. By gentle guidance and support with the surgeon's hand it can be executed with a minimum of exertion, and no patient will ever push it to the danger point marked by pain. In passive movements, made by the surgeon's hands, muscles and nerves remain neutral; but become suddenly incoördinately active, when pain even threatens, and may disturb the fragments again. In the "Swedish movements" a certain degree of resistance is opposed by the surgeon to a directed voluntary muscle contraction. They can only be considered for the very finishing treatments of fractures.

Now after having convinced ourselves of the need of early physiologic, that is active, movement in reestablishing the functional work of broken bones, how are we going to apply this principle to the patella? We review the physiologic anatomy of the patella, a sesamoid bone. It is not surrounded by a sheath of periosteum, it has no cortex and no marrow, but is a dense ligamentous structure infiltrated with bone substance. On the outside the quadriceps fascia serves as periosteum; on the inside, synovial cartilage makes it part of the knee joint. The patella does no weight bearing, but serves as pulley and as anterior protecting wall of the joint. In fact, it is a local bony reinforcement of the broad quadriceps sheath and femoral fascia combined. In some persons and families a

brittleness of this bone seems to exist, and they are the ones whose patellas break without external violence being directly applied. With the knee flexed, when the upper half rests on the femoral condyles, while the lower one hangs free over the joint, overstrain of the extensor muscle can break it transversely and then of course, the tear continues on both sides into the fascia-tendon.

This analogy to any tendon rupture makes it clear that operative treatment with suture would be logical. Those of us who have seen the torn fascia hang like a curtain between the fragments, will certainly talk operation to the patient. However, be it said that bilateral suture of the fascia-tendon after lifting the torn shreds from between the fragments and removing the free and clotted blood, is more logical than simply wiring the bone together. The width of separation between the fragments will allow conclusions as to the extent of the fascial tear and the swelling of the joint will indicate the amount of hemorrhage. Under favorable conditions it is doubtless good practice to accede to the patient's wish and be conservative, but under strict observation.

I wish to report one such "conservative" case. The outlook of this fifty-six year old lady, according to the textbooks, was certainly gloomy: ten to sixteen weeks total disability and eight to twelve weeks more for partial disability, nearly one-half year's time lost. This length of time looks as if we doctors used the first ten weeks to get the joint stiff through splinting, and then the second part of the time to break up this stiffness by "passive" movements. The photograph of Hawley's patient who bends and stretches his leg only four weeks after operation raises very decided doubts whether there is any inherent reason for keeping such patient disabled twenty weeks longer. Warbasse reports that in his first operative cases he allowed his own patients to walk without crutches after six weeks, but as they got hypertrophy of the patella, he returned to his more conservative treatment with prolonged splints and crutches.

The case in question contracted the fracture by force of muscle in a fall. The x-ray showed nearly an inch separation with the fragments not quite in the same level plane. A posterior gutter splint of plaster and adhesive loops pushing the fragments together, was applied, and the patient was kept in a hospital bed for a week with an icebag over the knee. After that the dressings were removed, gentle stroking massage applied, and the patient was requested to do active bending with the leg well supported by my right hand, while the thumb and index of the left held the patellar fragments together. About ten degrees

of flexion were easily and repeatedly accomplished; then splint and pressure dressing were reapplied. The next day the bulging upper recess of the joint was aspirated with a rather fine needle and two and one-half ounces of liquid dark blood withdrawn. We repeated the massage, supported movement and gutter splint with cotton padding over the upper recess and a firm ace bandage. The patient stayed in bed for nearly three weeks, while this daily treatment was applied in ever increasing extent: rubbing massage from ankle up to the groin; then active supported movement gradually up to ninety degrees, while the left two fingers held the patella together; and posterior gutter splint with ace bandage. She was up with crutches for increasing periods after the second week. After being sent home to apply the well learned treatment herself, she came back twice weekly for control.

I consider extending the leg while lifted in the hip as more critical than bending the knee. She could do both well to full extent after five weeks. The x-ray at that time showed close apposition; but no callus. After seven weeks, however, the gap was filled with good callus. At that time she was allowed to leave the gutter splint off, but used the firm ace bandage and a cane. After nine weeks she does not pay any more attention to precautions. However I warned her that her fracture is a proof that her patella has less than normal strength. Previous patellar fractures had been operated on by me. Not one of them was even partially disabled for more than three months; but they could not be flexed to much over ninety degrees. I agree with Warbasse, that if this treatment personally by the surgeon was not so expensive, it might become quite the order of the day.

When Willems in Belgium began to open infected knee joints wide and with continuous traction-extension on the leg made the boys do active movements with the knee, getting them functionally restored to service many months earlier than others, I became deeply impressed with the importance of keeping wounded joints in a physiologic condition. This should be impressed upon the medical students who observe the setting of fractures in the clinic, but see far too little of the after-treatment. It might help if copies of the Bulletin of the American College of Surgeons were placed in the hands of every medical student at graduation.

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THE GREAT QUARTET

Laennec, Koch, Roentgen, von Pirquet

By KENDALL EMERSON, M.D.

Advance in human knowledge is not accidental. It results from the work of men capable of building higher on the foundation of established facts. Nowhere in science is this better shown than in the age old conflict which man has waged against his arch enemy tuberculosis. Among the army of builders who have contributed to our present day knowledge of this scourge, four names lead all the rest.

The first of these, Laennec, a hundred years ago, recognized that more accurate knowledge of the disease must precede any hope of its control. The old method of searching for tell-tale sounds in the lungs by pressing the ear to the chest was not enough. One day he saw a boy scratching one end of a log while a companion listened to the sounds transmitted at the other. He applied the law of conductivity of sound to the diagnosis of tuberculosis of the lungs and our modern stethoscope is the result.

Just fifty years ago, March 24, 1882, Robert Koch announced that he had discovered a germ always present in active tuberculosis disease and had produced tuberculosis by injecting it into animals. He named his new discovery the tubercle bacillus. Laennec, through the perfecting of diagnosis, Koch, through the discovery of the cause, made their respective and momentous contributions toward the conquest of tuberculosis. Both recognized, however, that some method of still earlier diagnosis was needed, for the disease is vastly more curable when detected in its very beginning before it is revealed by auscultation (listening to the sounds of the chest) and before the tubercle bacilli can be found in sputum from infected lungs.

It was reserved for Roentgen to disclose the next great step in early diagnosis. A distinguished physicist, Roentgen was experimenting with the tubes invented by Dr. Crookes for the purpose of passing an electric discharge through a vacuum. Roentgen made the startling discovery that reflected from the negative pole were some myste-

rious rays capable of passing through solid substances impenetrable to light. He photographed the human body and revealed the bones and organs of a living man. With improved technique, the X-ray is now used as our surest method of discovering the spots and shadows in an infected lung which prove the presence of active or quiescent tuberculous disease.

The fourth great scientist, von Pirquet, added the last significant refinement in diagnostic procedure, the skin test which has been given his name. This discovery was based on the previously known fact that people suffering even mildly from certain diseases, or who have previously suffered from them, develop changes in their bodies which make them sensitive, as we say, to that particular disease. By the use of tuberculin, von Pirquet made skin tests on individuals suspected of having tuberculosis in its early stages. If the skin grew red on the second day, he called the test positive since it indicated that the patient had been infected at some time with tuberculosis.

Laennec, Koch, Roentgen, von Pirquet, these are the immortals whose glory lies in their successive contributions to the warfare against an enemy which has claimed more human victims than all the wars of history. Each built anew on the firm foundations laid by his predecessors, and the structure they have reared is the monument to their undying fame.

The priceless contribution each made to medical science has been largely responsible for the phenomenal drop in the tuberculosis death rate. Today, in the United States the death rate from the disease is less than half what it was in 1907. Efforts to reduce the rate still lower continue. Beginning April 1, tuberculosis associations throughout the country will undertake an Early Diagnosis Campaign under the slogan, "Find the Other Case." During that time closer cooperation in discovering cases of tuberculosis will be sought among doctors, health officers, public health nurses, and social workers, and everyone who suspects he may have tuberculosis will be urged to have a medical examination to make sure. If anyone finds he has the disease, he will be urged to secure medical examination for other members of the family to discover the source of the infection, for only by "Finding the Other Case" can tuberculosis be overcome and its spread stopped.

NEW AND NON-OFFICIAL REMEDIES

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STATE HEALTH COMMISSIONER'S PAGE

 *O. C. Stulsmant, M.D.* 

MATERNITY AND CHILD HYGIENE

THE PRACTICE OF PREVENTIVE MEDICINE

The physicians of the state are cooperating with the Bureau of Maternity and Child Hygiene of the State Department of Health. This is shown by the fact that 55.5 per cent of the requests for prenatal letters have come from physicians. General practitioners have signed 71 per cent of the request blanks tabulated. Practitioners of nine specialties in the practice of medicine have cooperated. Requests have been received from 76.7 per cent of the 99 Iowa counties. This service seems more appreciated by physicians who have expectant mothers under their care located in cities and towns of less than five thousand population. Approximately 76 per cent of the sets of prenatal letters have been mailed to expectant mothers living in municipalities within this population group. Sets of prenatal letters for more than five women each have been requested by 15.8 per cent of the physicians.

The New York State Department of Health

began a similar service for expectant mothers under the care of physicians in March, 1930. By the close of that year, 591 mothers had received the full series, and 505 remained on the mailing list. The commissioner of health of Iowa estimates that at least 5,000 expectant mothers will benefit from this service during 1932. Within the past twenty-one days a 71.4 per cent increase in the average number of daily requests received has occurred.

The care of expectant mothers in preventing complications is a splendid type of preventive medicine. Both mother and babe, as well as the whole family and the community, are benefited. Therefore physicians may render a type of service in this field unequaled in many others.

Knowing the benefits that will accrue, this Bureau of our Department aims to inform expectant mothers of the value of such knowledge and we hope for full cooperation from the medical profession in giving each applicant the scientific examination and advice commensurate with the best medical thought of today.

PREVALENCE OF DISEASE

Disease	Jan. 1932	Dec. 1931	Jan. 1931	Most Cases Reported From
Diphtheria	92	124	46	Woodbury, Pottawattamie
Scarlet Fever	227	186	541	Scott, Polk
Typhoid Fever	4	8	2	Black Hawk, Clark, Lee
Smallpox	269	241	216	Pottawattamie, Sioux
Measles	14	16	16	Wright
Whooping Cough	108	118	75	Black Hawk, Woodbury
Chickenpox	267	359	324	Woodbury, Black Hawk
Poliomyelitis	1	12	7	Des Moines
Tuberculosis	26	21	46	Scott, Johnson, Black Hawk
Syphilis	179	181	77	Woodbury, Polk
Gonorrhea	253	318	128	Polk, Johnson

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THE COFFEY-HUMBER CANCER TREATMENT

"Cancer is today the outstanding problem in medicine and public health . . .".¹ There is more money spent at this time in cancer research than in the investigation of any other one disease and, while a wealth of knowledge has been amassed, we are still far from a solution of the biologic phenomena underlying the growth and activity of malignant tumors within the body. From time to time announcements are widely heralded by the lay press that cancer is conquered. In a considerable number of instances these announcements have originally been made before medical bodies or reported in well rated medical journals. During the past year as many as a dozen such announcements have come to the writer's attention. Many of these are reannouncements of old or discarded theories with a new array of observations to furnish a background of proof.

It is often extremely difficult for even well informed scientific bodies to place a proper evaluation upon an announcement of a new cancer theory since the matter requires long and tedious labor for its proof. It is not at all surprising that the credulous laity should be impressed by new claims and new hope even when the medical profession, after investigation, promptly declares the scheme a fake and its perpetrators charlatans.

In August of 1930, Drs. Coffey and Humber appeared before the Pacific Association of Railway Surgeons and presented an extensive paper upon their new (and patented) treatment for cancer. They announced that between January 6 and August 1, they had had under their control some 2600 patients suffering from cancer. In this paper they denied any claim for their treatment as a cure for cancer but stated rather that the treatment seemed to affect favorably the course of the cancer and remove extensive growths by necrosis and

disintegration of the tumor. Important among their claims at this time was the relief from pain enjoyed by the patients treated by the extract. It is interesting to note that the originators of this treatment in their first application for a patent are reported as stating, "Our invention relates to a therapeutic substance having the property of stabilizing tissue growth and which, by virtue of this property, is capable of controlling and/or destroying carcinoma, sarcoma, and other malignancies." On a basis of these statements the Patent Office refused to issue a patent. Drs. Coffey and Humber, however, either underwent a change of heart towards scientific procedure or else upon advice of counsel, they resubmitted their substance for patent on July 1, 1930, with very much modified claims. At any rate, patent No. 1771976 was issued to the petitioners by the Patent Office under date of July 2, 1930.

Following the subsidence of the first flare of publicity accorded the announcement of the cancer treatment by Coffey and Humber, the medical profession settled down to a policy of watchful waiting. Since the initial report of the treatment indicated that 71.5 per cent of their 2600 patients were relieved of pain, it was felt by many that these investigators had added materially to the therapy of cancer even though a cure was not effected. Without waiting for more results or without a painstaking investigation on their part, the California Medical Association adopted a resolution apparently endorsing the scientific research and the promotional methods of the investigators. This official action stirred up protest from some members of the California association, who attempted to have their protest published in the official organ of the society, *California & Western Medicine*. Blocked in this means of publicity, this group circulated their complaints in mimeographed form, protesting the passage of the resolution by the state society.

About this time, the Chamber of Commerce of Portland made an offer to Drs. Coffey and Humber to establish a clinic in their city. The city and county medical societies protested, demanding that if the work was to be carried on in their city, it must be under the complete control of the University of Oregon Medical School. This plan was apparently unacceptable and the Portland Clinic did not materialize.

The Coffey-Humber treatment next appears as a matter of business before the Commerce Committee of the United States Senate. This committee considered a resolution, sponsored by Senator Harris, which proposed that national funds be appropriated to foster research work in cancer control. The committee summoned both Drs. Coffey

and Humber to a conference with them as proponents of the type of research to be followed should funds be secured from the National Treasury. Fortunately, the bill did not secure the necessary backing for passage.

Next the cancer cure forged its way to front page space by a controversy with the New York Department of Health over the establishment of a cancer research organization in New York state. The precipitating event in the controversy was the offer by Mrs. Grace Isabell Hammond Connors, widow of the late William James Connors, to donate to Dr. Coffey and Dr. Humber her palatial home and grounds, valued at one million dollars, for the purpose of continuing their experimental work in the east. Again the agencies of organized medicine triumphed and the western scientists were invited to forego their New York extension.

The curtain has apparently been rung down on this much-exploited treatment and it appears now that but little excuse exists for continuing this patented treatment. Working independently, two careful investigators have studied the treatment and its end results, and in their recent report, decry the method as one beneficial in the treatment of malignancies. R. H. Harris² of the W. K. Kellogg Foundation studied 415 patients treated by the patented method from both the clinical and the pathologic point of view. He states, "Malignant tumors were observed to increase in size, and new extensions and metastases to occur in many patients during the time that they were receiving the extract injections." In summary, he reports:

"1. The benefits of use of the suprarenal cortex extract experienced by patients with malignant tumors in relation to gain in weight and relief from pain did not occur uniformly or in the majority of the patients observed by us.

"2. The extract administered to these patients had no selective influence on the growth, necrosis, or sloughing of malignant tumors.

"3. Necrosis and sloughing of malignant tumors were not beneficial but were detrimental to these patients, producing hemorrhage, anemia, distressing fistulas, perforation with abscess or peritonitis, and other serious consequences.

"4. Cure of malignant disease in patients with advanced carcinoma or sarcoma, in view of the experience of the patients of this series, cannot reasonably be expected to occur as a result of use of the suprarenal cortex extract.

"5. The benefits to be expected from use of the suprarenal cortex extract lie principally in improved appetite, improved muscle tone, and better feeling of general well-being of patients who

are ambulatory or who are not too far advanced toward a fatal termination of the disease."

H. A. Ball³ following an intensive study of 89 cases which received the Coffey-Humber treatment, observed grossly and microscopically the necrosis and sloughing present, particularly since the originators claim much benefit from these processes. He found that the amount of necrosis in all three series roughly paralleled that reported by Coffey and Humber in their first group and was materially less than that reported by them in their second, or more adequately treated group. It is of interest that the degree of necrosis reported by Coffey and Humber in their first group does not exceed that in untreated, or in what might be termed inadequately treated, cases. Moreover, even should sloughing be accelerated, it may be a distinct disadvantage to the patient through massive hemorrhage and extensive pyogenic infection.

During the past few weeks, the Southern Pacific General Hospital has issued the first number of a Bulletin which appears to be chiefly a publication defending the Coffey-Humber treatment although reports of a more general nature are presented. Of the forty-seven pages of the Bulletin only fourteen are used for reports not directly related to the cancer research and treatment. It is rather disappointing that in the several reports published in this bulletin, none should give a statistical survey of their work. Analysis of the material from the cancer clinic is lacking, but each essayist prominently expresses faith in Drs. Coffey (chief surgeon and manager) and Humber (hospital superintendent) which is without a doubt a tactful handling of the matter.

To quote from the Bulletin,⁴ "Our statistics show that the cancer patient, in a large number of cases, shows other pathology than malignancy, which is understandable in view of the fact that the bulk of the cancer patients have arrived at an age where degenerative diseases occur. Furthermore, Dr. A. M. Moody, our pathologist, reports that autopsies performed by him reveal that 63 per cent of the deaths which have occurred were caused by intercurrent diseases independent of cancer."

Again we quote,⁵ "My experience in this research work, in the clinical field particularly, has convinced me that the Coffey-Humber extract in these heretofore hopeless cases, abandoned to the human junk pile, demonstrates that it is the most valuable therapeutic agent yet known to medical science in combating cancer."

Apparently another "cancer cure" has been proved ineffective and, as is usual in such cases, its proponents criticized. Hope springs eternal and tomorrow will bring into prominence another and

still another cure. Serious and conscientious efforts should ever receive encouragement but past experience should make us wary of the new cure. With the ever-increasing agencies adequately supplied with equipment, finances and brains, the proving ground for all untried claims should be these established channels.

James Ewing,⁶ whose experience as an observer is preëminent in the field of cancer research, aptly sums up the background for many of the cancer cures proposed during the past decade: "Among a thousand inoperable cancer cases coming from all sorts of conditions after various forms of treatment or none, there will always be a small proportion that will show immediate and definite improvement, due to rest, relief from irritation, improved appetite and increased exercise and nutrition. There will also be a certain number of incorrect diagnoses and their recovery may be complete under the changed conditions. The good effects of radiation may not be seen for several months after the cessation of treatment and relief from the radiation sickness. Many of the cancer cures float on this driftwood."

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THE NEW RUSSIAN PROGRAM

Russia has adopted a policy of developing preventive medicine and of enlarging the field of diseases considered to be social illnesses. In 1930 a reorganization scheme* was promulgated. A system of scholarship was set up by which, beginning with 1931, 60 per cent of the medical students should each receive 90 rubles per month, on condition that they contract to serve the state after their training was finished. In 1930 there were 24 medical schools, and it was planned to have six more established by 1932.

The basis of the new plan for medical schools is given as follows: (1) The graduates should be trained in rigorous, scientific and materialistic thought; they should be physicians able to serve the masses therapeutically and prophylactically; (2) the course should be thoroughly coördinated, duplication eliminated and number of subjects restricted; (3) recitations and lectures should be restricted, the students should be encouraged to take part in discussions, laboratory work, clerkships and seminars should be increased, "active" teaching methods with study of the material by the students themselves should be used, "practical" work should

take 50 per cent of the time, but the whole atmosphere should be practical; annual examination should be suppressed, but attendance should be recorded; (4) Latin should be discontinued for all purposes and Russian terms should be used consistently.

The medical faculties are separated from the universities and placed under the Commissariat of Health as practical or technical schools. Specialists are desired for the following fields: (1) The collective farms; (2) state industries; (3) maternity and infancy protection; (4) contagious disease prophylaxis; (5) health centers; (6) the usual clinical branches. Three faculties are set up: (1) general therapy and prophylaxis with a section of stomatology; (2) hygiene and sanitary sciences; (3) maternity and child protection, with a section of maternity and infancy protection and one of child protection. Other sections of the faculties will be set up as needed.

Admission of students to schools and to sections will be controlled in accordance with future needs. Students will be admitted twice a year, in January and August, and all work will be done in two groups. It is not possible to state what the preliminary education will be. The courses are to last four years, except that in stomatology, which is three and a half years long. Students of general therapy and prophylaxis and of maternal and child protection must spend a fifth year in active work under direction.

The five-day week, which is general in the United States of Soviet Russia, is adopted. Each day is counted as six hours. The school year contains 216 working days. The curricula include basic physics, chemistry and biology and a little time for a foreign language. In addition to the usual subjects there are lectures in the principles of sovietism, in political economy, in the physiology of materialism and in military science. There is also physical work in the collective farms, state industries and health centers; and a total of 11 "decades" of military service are required. The student while at work in the summer receives in addition to his scholarship from 50 to 60 rubles a month. It is said that this work prevents him from being isolated from the actualities of life and that he can study the conditions which produce disease. In connection with the military service it is said that a physician is always called to serve, some day or other, in the army.

In the programs as given, the medical course proper for students of general therapy and prophylaxis does not differ greatly from ordinary curricula, except that the usual subjects are reduced to about two-thirds of their ordinary minimum

allotment and that hygiene is given from five to ten times as much time as is commonly allotted. For students of maternal and child welfare, the other usual clinical subjects are cut to about 40 per cent; the work in pediatrics and education is increased from 7 to 10 times, but obstetrics is still below the usual schedule.

In the Faculty of Sanitation, anatomy and obstetrics are reduced to minima of 28 and 16 per cent of the usual amounts; hygiene and related subjects are multiplied tenfold. Nothing is known of the facilities to be available for clinical teaching.

In the medical school there are to be three grades of instructors: professors, docents and assistants. All are to be on full time. Their pay and required hours of teaching are as follows: professor—3,600 rubles per year, 240-360 hours per year; docent—3,000 rubles, 360 hours; assistant—5,520 rubles, 480 hours.

In principle, an individual cannot hold more than one chair but the holding of chairs in different schools is somewhat encouraged; the pay is then at the rate of 75 per cent of the base pay of each chair for hours above 360 per year.

In summary: a clear-cut experiment in medical education is proposed in Russia. There is almost complete control of medical education, including the number of students admitted, not only in toto, but to the various sections, and including the future activities of the students. Medical education is frankly divorced from university work and made to serve the needs of the state.

The medical course is reduced by at least one year. A small amount of new work in special politics, economics and philosophy is introduced. These changes reduce the usual medical subjects to two-thirds, or less, of the time given in ordinary curricula. Hygiene and related subjects are given much more time than is usually given. Changes in teaching methods are advocated.

More novel is the splitting of the curriculum into three sections designed to train physicians to work in distinct fields. This presumes a smaller substratum of knowledge and experience common to all medical graduates than has ever been suggested before. It would seem to make transition from one field to another impossible. The plan apparently does not provide for investigative work in connection with the teaching of medicine.

* F. R. Dieudaide: *National Med. Jour., China*, xvii, 283 (June) 1931.

SPECIALISTS FOR THE CARE OF THE POOR

During the past few years, much attention has been directed to the specialists in medical practice and in many instances, plans for the supervision and control of physicians declaring themselves

specialists have been given serious consideration. We are interested to note that the problem is being studied abroad and that the problem has already received official consideration in England. The British Medical Association has recently considered a plan devised by the Hospital Savings Association, which is intended to deliver the service of specialists to the poorer people at markedly reduced fees. The association proposes that poor people should be provided for outside of the hospital with specialists' services at a fixed fee of \$5.00. Since this program cannot be compulsory, the association expects to prepare a list of specialists willing to serve in this way and the association will direct their members only to the physicians whose names appear in this panel. The British Medical Association, in considering this plan, pointed out that ample provisions already exist for the specialist to see a patient at a reduced fee, provided the patient comes to him with his full knowledge that he is unable to pay the full fee. The Hospital Association is not satisfied with this program, claiming that their members do not want charity and that any form of reduced fees now in operation is based upon a program of acknowledged charity. They want to pay for the service if terms can be arranged so that they can afford it. The plan has been considered of sufficient importance by the British Medical Association that the association has summoned a meeting of specialists in London to consider the scheme. If the plan is endorsed by these specialists, the British Medical Association proposes the following:

1. A consultants' board shall be constituted, containing representatives of the Royal Colleges of Physicians and Surgeons and the British College of Obstetricians and Gynecologists, in whose discretion will lie appointment to the panel.
2. The names will be arranged alphabetically under the headings of physicians, surgeons, gynecologists, dermatologists, otorhinolaryngologists and radiologists, practitioners in any division to be permitted to have added to their names indications of their specialties.
3. For admission to the panel one or more of the following criteria must be satisfied by the practitioner; (a) hospital or other appointments affording special opportunities for acquiring special skill and experience of the kind required for the performance of the service to be rendered, and actual recent practice in performing the service; (b) special academic or post-graduate study of a subject which comprises the service, and actual recent experience; (c) generally recognized special proficiency and experience in a subject which comprises the service rendered.

So far as we know there has been no official recognition of such a plan in this country but in

many ways American medical methods have followed those of the continent and this may become a problem with us within the next few years.

IOWA WHITE HOUSE CONFERENCE DES MOINES

Iowa's children and their physical, mental and moral welfare will be the theme of a convention at Des Moines April 14-15. All sessions will be held at the Fort Des Moines Hotel. The occasion is the final meeting of the Iowa White House Conference on Child Health and Protection. The general public is invited, and all local organizations interested in child welfare are invited to send official delegates.

The conference was organized at the request of President Hoover to follow up the work of the National White House Conference which met in November, 1930. The object was to check the findings of the national group in regard to the state, to make independent studies, and to formulate recommendations. Governor Turner appointed Dr. D. C. Steelsmith, state commissioner of health, as chairman, with a general commission representing the state-wide organizations interested in child health and welfare.

The conference is divided into the four following general sections: medical service; public health service; education and training; and the handicapped.

These are subdivided into committees and sub-committees covering the following phases of child life:

(1) A study of maternal and neonatal mortality in Iowa; pituitrin—with reference to infant mortality; a study of childhood morbidity and mortality in Iowa; a study of infant and childhood nutrition in Iowa; prematurity; breast feeding; proprietary foods; vitamins; standards of judging nutrition; dental caries; a study of control of contagious diseases in Iowa; immunization-control of diphtheria and smallpox in Iowa; to what extent are children protected; present methods of promotion; attitudes and leadership of physicians; quarantine measures with particular reference to those diseases not subject to control by immunization; a study of tuberculosis and rheumatism in children in Iowa; chronic non-specific lung infections in Iowa; school health programs in Iowa—rural, smaller cities, larger cities, county health units, pre-school round-up, elementary schools, adolescent girls, adolescent boys; a study of

courses in nurses' training schools with reference to pediatrics and obstetrics.

(2) State health organization in Iowa; city health organization in Iowa; rural health organization in Iowa; relation of official and non-official agencies in the public health program of Iowa; the training of personnel; the place of child health work in the official health program; relations of practitioners of medicine to the official health work of Iowa; relations of practitioners of dentistry to the official health program of Iowa; communicable disease; milk production and control; milk-borne disease in Iowa; survey of the present status of the milk supply of Iowa with reference to adequate safeguards; the economic aspects of milk production and control in Iowa; practical supervision over the milk supplies of cities and rural communities; clinics for mothers and children; summer round-up; hospital facilities; immunization against smallpox and diphtheria; tourist camps.

(3) The family and parent education; the infant and pre-school child; the school child; nutrition service in schools; social hygiene in schools; health problems of the schools; cooperation of the home with the school; school plant; mental hygiene in schools; safety education in schools; professional training of teachers and leaders; rural schools; parochial schools; vocational guidance; radio; physical education and recreation; special classes; youth outside the home and school; girls' work; boys' work; recreation outside the school; reading; rural conditions; youth in industry and business.

(4) The dependent child; the delinquent child; physically and mentally handicapped child; organizations for the socially, physically and mentally handicapped.

At the April conference the sub-committees will meet and review the results of research work which they have been conducting for several months. Committee chairmen will present the more important findings in program talks during the two days. It is believed that out of this mass of information will come important suggestions for the improvement of child care, health and education in Iowa. Several speakers of national prominence as well as experts from this state will appear on the program of the spring meeting.

The section chairmen and co-chairmen are: Dr. Fred Moore; Dr. M. E. Barnes and Dr. James Edwards; Agnes Samuelson and Dr. George D. Stoddard; and Dr. Mae Habenicht.

The members of the general commission and the organizations represented are: Dr. D. C. Steelsmith, state commissioner of health; Mrs. M. P. Summers, president Iowa Congress of Par-

Editor's Note: By vote of the House of Delegates, in session May, 1931, a special committee was created to represent the Iowa State Medical Society in the Iowa White House Conference. Dr. Fred Moore, of Des Moines, chairman of the committee, was made chairman of the medical service section of the conference.

ents and Teachers; Dr. L. W. Snuggins, president Iowa State Dental Society; Dr. M. E. Barnes, State University of Iowa; Dr. Mae Habenicht, director bureau of child welfare; Agnes Samuelson, state superintendent of public instruction; Mrs. B. C. Hopkins, chairman legislative council; Effie Doan, state conference of social work; Mrs. Ida B. Wise Smith, president W. C. T. U.; Mrs. Ellsworth Richardson, president Iowa farm bureau women; T. J. Edmonds, president Iowa state conference of social work; Mrs. M. Myrton Skelley, department of Iowa, American Legion Auxiliary; Dr. John H. Peck, president Iowa Tuberculosis Association; Dr. Channing G. Smith, president Iowa State Medical Society; Mrs. Wm. Larrabee, Jr., president Iowa Federation of Women's Clubs; Prof. George D. Stoddard, director child welfare research station; Dr. J. F. Edwards, Iowa State College; Dr. Fred Moore, Iowa State Medical Society; Prof. O. R. Latham, president State Teachers College; Mrs. S. E. Lincoln, chairman joint committee on social hygiene; F. H. Cooney, American Legion, Department of Iowa; Charles F. Pye, executive secretary State Teachers Association; J. C. Lewis, president Iowa Federation of Labor; Charles E. Hearst, president Iowa Farm Bureau Federation.

THE IOWA CANCER SURVEY

There is no question in the entire field of medicine now receiving the attention given to cancer, its diagnosis, treatment and care. While the specific etiologic factor is unknown, and possibly never will be known as definitely as are the causes of many other diseases, enough is known to point the way to the development of better methods of treatment and care.

Cancer is the outstanding challenge to the medical profession today. Because of its constantly mounting mortality, its discovery in younger and younger age groups, and its widespread distribution, it is of the highest importance to know as definitely as possible all factors bearing on the disease. From past experience we know that these factors are not of universal application but vary for each community. For this reason a standardized program of cancer control cannot be formulated but must be built around the factors controlling the situation in a given locality or state.

The Iowa State Medical Society has long been interested in cancer and this interest has culminated in an invitation to the American Society for the Control of Cancer to make a state-wide survey of this disease, reporting its findings with recommendations to the medical society for its guidance in the development of an improved program of cancer service in this state. The cancer

society accepted the invitation for the survey, which will be made without expense to the medical society, and Dr. F. L. Rector, field representative for the central district in which Iowa is located, will begin the field work in the near future.

It will be necessary for the hospitals of Iowa to furnish certain information and for this purpose a short questionnaire has been sent to each hospital of fifty beds and over asking for certain facts, including a minimum of statistical data. Dr. Rector plans to visit each hospital in order to discuss the problem with hospital authorities and staff members. Hospitals can render a distinct service by supplying the requested information at the earliest possible date.

This survey is a *fact finding undertaking*. The report will discuss the findings and the recommendations will be based on the analysis of the collected material. The field work will require several weeks for its completion. The objective always kept in view is the development of a better service to the cancer patient and a better understanding of this problem by the medical profession. The control of cancer belongs to the profession and the report of this survey will carry a suggested program in which the medical profession will have a major part, the details of which will be developed as the work progresses.

This report, developed by an unbiased national organization constantly studying this problem in all parts of the country, should prove of great value to the physicians of Iowa. Since the proposed survey bears the unqualified endorsement of the state medical society, every physician in the state should be ready and willing to cooperate to the fullest extent in the development of this very important project.

SPECIALTY SALESMEN

Quackery goes back to the beginning of human history and has existed, according to records of early civilization, in all ages down to the present day. It is evident that human credulity has been preyed upon for at least four thousand years. With this background of antiquity, one is safe in the postulation that quackery in some form will always exist.

Our attention has recently been directed to the activity of certain "specialty salesmen," who are promoting the sales of intricate electrical apparatus which has so recently been developed that no scientific information of its usefulness has been acquired. It appears that these salesmen call their prospective customers by phone and invite them to attend a special showing of the apparatus at a convenient showroom or hotel. The salesman then fortifies his demonstration by the presentation of

an array of "facts," which may or may not have a scientific background. Investigation of the apparatus and its claims for usefulness in medical practice indicate that in many instances the "specialty salesman" has but little, if any, scientific data upon which to advance his product. All too frequently, the salesman depends upon his ability to sell rather than the merits of his product to justify the sales. As a result, physicians frequently purchase high priced and complicated apparatus for medical treatment which, as a result of their own experience, is soon discarded as ineffective and entirely useless.

Through the offices of our National Association, reliable information may be secured concerning practically any form of apparatus now on the market for use by physicians. Councils of investigation and laboratories for testing medical products are established and maintained by the A. M. A. for the use and protection of the medical fraternity. It would appear that the physician who is sufficiently impressed because of a well-given demonstration would do well to write the association headquarters in Chicago for such information as they may have on file relative to a particular piece of equipment before actually purchasing it.

Quackery has always traveled along the lines of greatest commercial gain. During the Eighteenth Century mysticism held sway and various drugs and appliances flooded the market. Sales were in direct proportion to the atmosphere of mystery which surrounded the cure and we find many of these quacks held in high esteem by the nobility and the patrons of literature of that time. If one pursues the history of this period he will be impressed with the similarity between the forms of equipment offered, the claims and cures declared, and the same high pressured methods employed for their sales at that time and those employed now. During our own time we have witnessed the exploitation of many quackeries. Prior to the enactment and enforcement of our pure food and drug laws, hundreds of remedies flooded the market with high sounding names and alluring promises for the cure of practically all ailments. Since the passage of our pure food and drug laws this form of quackery has been on the decline, although we still find the shelves of many drug stores weighted down with medicines (bearing a revised label to meet the requirements of the law) which have been conclusively proven to be of little therapeutic value. Our laws do not yet reach the vendor of mechanical or electrical apparatus alleged useful in the treatment of disease. Our laws do protect physicians in declaring that unwarranted or fraudulent literature may not be sent through the mail.

Nothing, however, prevents the "specialty salesman" from pushing the sales of his apparatus by direct demonstration. There are probably few physicians in the state of Iowa who would become interested in electric belts, magnetic rings, electrical shoe insoles, or other hokus-pokus of this sort. This apparatus together with the gold brick and three shell game are in the discards. Today, to properly impress the physician, the apparatus must contain motors, sparks and tubes. We are frequently not so much interested in determining the fundamental principles involved in the construction of the equipment as we are in its appearance and the various claims made concerning its usefulness by the salesman.

There appears to be in almost every one, a vein of credulity and superstition against which argument is useless. The disposition to be humbugged often preponderates in our nature over reason and common sense. The vast fortunes that have been made from the sale of quack medicines in recent times and the enormous amount spent in advertising them, prove that the same credulity that characterised our ancestors still exists.

The advance of education has made little difference in depriving people of this quality, in fact men of education often fall easier dupes to the quack than those who are ignorant.

BELLE PLAINE PHYSICIANS CARE FOR INDIGENT SICK

The physicians of Belle Plaine, having organized an association for the purpose, entered into a contract to render medical services to the county indigent of Belle Plaine and Iowa township for an annual sum of \$1,200. The officers of the new organization are: Dr. G. W. Yavorsky, president, and Dr. N. B. Williams, secretary. The local society plans to hold frequent meetings and the new project promises worth-while results for the Belle Plaine physicians.

This plan was evolved as a result of three or four years' effort on the part of the physicians and supervisors of Benton county to work out a satisfactory solution of the problem of caring for the indigent sick. This contract is a pleasing evidence of the present progressive attitude which many boards of supervisors are taking toward an old and annoying problem, and certainly the Benton county board of supervisors, as well as the Belle Plaine physicians, are to be congratulated upon the progressive and cooperative spirit which prompts such an arrangement.

SPEAKERS BUREAU ACTIVITIES

MARCH BROADCASTS

The first series of radio broadcasts sponsored by the Speakers Bureau has been completed. The interest manifested in these talks has been sufficient to warrant the radio stations indefinitely extending the period given to the Bureau. The schedule of talks for March is as follows:

March 10—The Common Cold

March 17—Pneumonia

March 24—Spring Tonics

March 31—Hay Fever

These talks are broadcast on the dates mentioned from Station WOI at 1:00 p. m. The same talks are given one week later from Station WSUI on Thursdays at 8:00 p. m.

The interest and response to these talks on the part of the general public is indeed gratifying. Each week the announcement has been made that mimeographed copies of the talk given were available to those requesting them. To date 237 requests have been received. Of this number, 153 persons have asked that their names be placed on the mailing list to receive copies of all the talks; 67 requests came for copies of just one of the talks; five requests for four; three for two copies; and two requests for five of the talks. These people had all heard the talks given over the radio but wanted copies of the health message for various reasons—some of them wanted to read them more carefully and deliberately; some wanted to pass the information on to the other members of their family or to friends—in an authentic manner rather than in their own words; some wanted the papers for the basis of discussion in their local clubs; and some wanted to file them for future reference. Several requests came from registered nurses and several came from librarians who wished to make a file of these talks available to their readers.

It has been estimated by local and national radio companies that the number of listeners to a program lies somewhere between 1,000 and 10,000 for every reply received. Taking the most conservative estimate, 1,000, and multiplying by the number of inquiries received, would indicate that the Iowa State Medical Society is reaching directly a group of around 250,000 with its health messages. By sending out copies of the talks, we are reaching an even larger group.

HOW MANY?

It may be of interest to the members of the Iowa State Medical Society to know how many people are being reached through the educational program of the Speakers Bureau. The bureau is trying to keep

a record of the approximate number of people attending the meetings to which we send speakers. In the first two months of 1932, our speakers have addressed between 800 and 900 lay persons; about 300 doctors and 375 professional people other than doctors.

Most of the lay audiences have been luncheon clubs or Parent-Teacher Associations. Of the fifteen lay meetings in these two months, six were meetings of Parent-Teacher Associations; four were weekly gatherings of various Rotary Clubs; one Community Club; one Chamber of Commerce; one Lions Club; one Federated Women's Club; and one Professional and Business Women's Club. These meetings were held in the following counties: Calhoun, Dallas, Des Moines, Floyd, Hancock, Hardin, Humboldt (two), Madison, Polk, Scott (two), Story, Warren, and Woodbury. A variety of subjects were presented:

Fighters of Disease
Dental Preventive Work
Physical and Mental Health of the School Child
Public Health and Citizenship
Speech Defects in Children
Vagaries of Rheumatism
The Story of Life
The Prevention of Diphtheria
The Prolongation of Life
The White House Conference on Child Health and Protection
The Effect of Certain Gland Changes Upon the Human Body
Human and Bovine Tuberculosis
The Relation of Preventive Medicine to Business Economics
Social Hygiene

Scientific programs were arranged for eight county medical societies: Bremer, Carroll, Cerro Gordo (two), Hardin, Henry, Jasper, Madison and Polk. A meeting was arranged for the Second District Medical Society and one for the annual meeting of the Iowa Heart Association. The following subjects were discussed:

County Contract
Mistakes in Diagnosis
Laboratory Methods for Diagnosis of Intestinal Lesions
Colles Fracture
Subacute Bacterial Endocarditis
Acute Mechanical Obstruction
Charcot Joint
Poliomyelitis
Nervous Disorders of the Stomach
Toxemias of Pregnancy
Symposium on Heart Disorders
Thyroid Gland
General Treatment of Fractures
Industrial Surgery

The President's Message

Your president has this winter found himself in a very interesting dilemma and I am going to ask the members of the society to briefly view with me the situation which arose as a result of the vote by the House of Delegates that a special meeting be called to consider modifications of the Perkins, Haskell-Klaus law. Early in the year conditions seemed to have arisen which made me question the wisdom of a special meeting this winter and I accordingly addressed to each member of the House of Delegates the letter quoted below*

The results were striking. Seventy-three of the 123 members of the House of Delegates voted by postcard and only one of the 73 voted in favor of a meeting. Two others qualified their answers in such a way that the actual vote was 70 out of 73 who were definitely opposed to a called meeting.

I have therefore decided not to issue the call for this special meeting. I am personally taking the full responsibility in this matter and hope that not only the House of Delegates, but the membership as a whole will feel that I have taken the right course. I am fully aware of the valuable contribution to medical education, medical practice and care of the indigents which our society may make by securing a modification of the Perkins, Haskell-Klaus law and it is my sincere hope that our active and united efforts in the coming months may result in the best wisdom and judgment of this society being efficiently and wisely exerted in our legislature. It seems clear, however, that the delegates believe these beneficial results can be secured by action of the House of Delegates at the regular session in Sioux City next May.

It is highly gratifying to all of the officers of the Iowa State Medical Society that this year, despite economic conditions, increase in dues and certain dissatisfaction, the dues are coming in as rapidly as ever before. As I write this message, the secretary has received the 1932 memberships of 1,595 Iowa physicians. This is the same number as received last year on this same date and last year was better than the years immediately preceding, so that our record for 1932 is an excellent one. Thus far fifteen counties have made complete returns and thirteen others have sent in more than 90 per cent of their dues.

It is important to notice that the constitution and by-laws provide that any society which has not paid its assessment in full by the time of the annual session shall lose its representation in the House of Delegates.

I therefore hope that every member of the Iowa State Medical Society will lend his loyal support, not only to the state organization and its officers, but to his local secretary, by remitting his dues at the earliest possible date.

Channing G. Smith

President's Letter to Delegates

January 14, 1932.

For the Members of The House of Delegates
Dear Doctor:

As you know, the House of Delegates in session May, 1931, voted for the president to call a special session of the House to hear discussions and possibly act upon suggestions received by the Committee on Public Policy and Legislation for amendment or modification of the Perkins, Haskell-Klaus law. These proposals received by the committee having been collated and edited, appear on pages 41 and 42 of the January, 1932, Journal of the Iowa State Medical Society (reprint enclosed).

Several factors in the present situation raise a serious doubt in my mind as to whether or not it is economic and expedient to call such a meeting at this time and in this particular year. I am therefore asking your advice as to whether or not this special session should be called. A postal card is enclosed upon which I would earnestly ask you to express your candid opinion.

To get the matter clearly before you, the reasons which lead me to question the propriety of calling this special session are as follows:

1. The relative dearth of proposals and suggestions for modification of the Perkins, Haskell-Klaus law (less than one hundred from members of the society).

2. The fact that there is no great disparity of viewpoint in the suggestions received. The practical unanimity of the suggestions received would indicate that there is no great need for a session to thresh out difficulties.

*See opposite page.

3. The fact that this is a poor time to ask the members of the House of Delegates to leave their practices and make a trip to Des Moines at their own expense.

4. The fact that a regular session of the House of Delegates will be held in May of this year at Sioux City, which will precede by several months the next session of the legislature, thus affording ample time for the Legislative Committee to get into practical shape any proposals approved by the House of Delegates.

5. Finally, your committee has a tacit gentlemen's agreement with Dean Houghton to present the proposals for final consideration only after he has had an opportunity to concur in them as representing the Medical College faculty and the Board of Education. Dr. Houghton will not return to the United States until about the time of the annual session next spring.

On the other hand, the Committee on Medical Education and Hospitals having prepared for the society, at a great sacrifice to themselves, a remarkably complete report upon this subject, it is incumbent upon us to make the fullest and wisest use of this invaluable material.

Furthermore, the House of Delegates formally voted for a special session and it is my feeling that I should call it unless by a large majority the members voting by mail, as requested in this letter, should decide that it is inexpedient. Your frank and prompt answer to the questions on the enclosed postal card will therefore be an invaluable aid to me in meeting this situation.

Faternally yours,

CHANNING G. SMITH, M. D.

EXCELLENT CONTRACT FOR GUTHRIE COUNTY INDIGENT SICK

On February 9 the Guthrie county members of the Dallas-Guthrie Medical Society entered into a contract with the board of supervisors of that county for the care of the indigent sick for the balance of the year. The desire of the supervisors to make sympathetic provision for medical care of those who are not regularly receiving other county aid, and at the same time to deal fairly with the physicians, resulted in a liberalization of the contract, both as to terms and remuneration.

A reading of the last two sentences in the second paragraph of the contract, which is quoted below, will show the solution arrived at. Thus this contract, instead of stating that "persons receiving other aid from the county shall be entitled to services under this contract," the physicians of Guthrie county have agreed to take care of anyone whom the supervisors designate, provided that the physicians cannot collect a fee from such persons. In return for this liberal provision, the supervisors agreed to pay an annual sum of \$2,537.32 which is adequate to pay also for these border-line cases, that is, those who are just able to meet minimum living expenses, but are actually unable to pay for medical service. It would seem that both the board of supervisors and the physicians of Guthrie county are to be congratulated upon the fine spirit of fairness evidenced in this contract, and that its terms should be commended to the consideration of other county medical societies and boards of supervisors. The contract (abstracted) follows:

GUTHRIE COUNTY CONTRACT

That parties of the first part, each and all of whom are duly licensed to practice medicine in the state of Iowa, and engaged in the practice of medicine in Guthrie County, Iowa, shall render to the pauper poor of Guthrie County, Iowa, the services hereinafter provided for upon the terms and conditions and for the consideration hereinafter expressed. Parties of the first part agree to care for those persons designated by parties of the second part or their legally appointed representatives; but nothing in this provision shall be interpreted to prevent party of the first part from collecting a fee wherever possible. Parties of the first part may appoint a committee which shall have power to determine the right of any person to receive services under this contract.

1. The services to be rendered under this contract shall include:—

- A. All medical and obstetric services and the necessary drugs and medicines in connection therewith except antitoxins, serums, vaccines, insulin, and anti-venereal remedies, and except eye glasses, artificial limbs, elastic hosiery and other such appliances, which shall be furnished at actual cost, and to be paid by second party.
- B. All minor office surgery and dressings, also all necessary services and after care to such pauper persons who return from hospitals when said persons have been committed to said hospitals either as state or county patients.
- C. Major surgery or cases requiring hospital care are not included in this contract, but in such cases the attending physician shall endeavor to have free transportation to the hospital provided.
- D. Nor shall this contract include services rendered to the inmates of the County Home.

2. The parties of the first part agree to render such services to the pauper poor, as defined above, upon the demand of the proper authorized officers of Guthrie County.

3. The services to be rendered under this contract shall be for the period ending December 31, 1932.

4. Parties of the second part shall pay for the services provided for herein the sum of \$2,537.32.

5. It is mutually agreed by all the parties hereto that this contract is a several contract by and between the second party and each of the first parties, and that the first parties are not bound jointly; and that this contract is not made for the benefit of any county patient; and that the default, malfeasance, or misfeasance of any party of the first part shall not be attributable to any other party of the first part.

SOCIETY PROCEEDINGS

Bremer County

The Bremer County Medical Society met in Waverly, Friday, February 19, for the regular monthly meeting and the following program was presented: Therapeutics, Robert L. Parker, M.D., of Des Moines; Illustrated Lecture on Proctology, N. D. Smith, M.D., of the Mayo Clinic, Rochester; and Legislation, Vernon D. Blank, of Des Moines.

Calhoun County

Con R. Harken, M.D., of Osceola, was the guest speaker at the meeting of the Calhoun County Medical Society held Friday, February 19, in Rockwell City. Dr. Harken presented a lecture on the Specialties in General Practice. A. C. Norton, M.D., of Rockwell City, gave a short but practical paper on Conduct of a Primiparous (Hypothetical) Obstetrical Case.

P. W. Van Metre, M.D., Secretary.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting Tuesday, February 16, at the Hanford Hotel in Mason City. The Speakers Bureau furnished the following program, which was presented after a six-thirty dinner: Charcot Joint, Carl R. Gillies, M.D., of Cedar Rapids; Subacute Bacterial Endocarditis, B. F. Wolverton, M.D., of Cedar Rapids; and Acute Mechanical Intestinal Obstruction, J. T. Grayston, M.D., of Marion.

T. E. Davidson, M.D., Secretary.

Clinton County

A symposium on pneumonia was presented at the recent meeting of the Clinton County Medical Society held in Clinton, Tuesday, February 23. The following speakers participated: John I. Marker, M.D., and Harry H. Lamb, M.D., both of Davenport, Medical Treatment; F. M. Keefe, M.D., Clinton, Surgical Treatment of Empyema. Discussions were opened by E. H. Boyer, M.D., H. K. Knudsen, M.D., and Grace Schermerhorn, M.D., all of Clinton.

Crawford County Annual Meeting

Members of the Crawford County Medical Society held their annual meeting in the court house at Denison recently and elected Dr. M. M. Loomis, of Manilla, president. Dr. J. James Duffy, of Denison, was named secretary and treasurer; Dr. C. L. Patterson, of West Side, delegate, and Dr. J. J. Meehan, of Denison, alternate delegate.

Decatur County

The Decatur County Medical Society met in Leon, Friday, February 26, and the following program was presented: Upper Abdominal Pain, Harry A. Dilley,

M.D., of Des Moines; Nephritis in Children, James E. Dyson, M.D., also of Des Moines; Interpretation of Blood Chemistry, Hubert McK. Parker, M.D., of Kansas City; and Diphtheria, Paul F. Stookey, M.D., of Kansas City. Twenty-five members and guests were present for the program and the six-thirty dinner served in the Civic Club rooms.

Fred A. Bowman, M.D., Secretary.

Grundy County Annual Meeting

The Grundy County Medical Society held its annual meeting, Tuesday, January 19, in the court house at Grundy Center, and the following officers were elected: Dr. George R. Gould, of Conrad, president; Dr. R. N. Cullison, of Dike, vice president; Dr. J. E. Rose, of Grundy Center, secretary and treasurer; Dr. H. V. Kahler, of Reinbeck, delegate; and Dr. M. H. Thielen, of Grundy Center, alternate delegate.

Hardin County

The bi-monthly meeting of the Hardin County Medical Society was held in Iowa Falls, Tuesday, January 26. Dinner was served at the Woods Hotel at six o'clock and was followed by an address on Poliomyelitis by Lee Forrest Hill, M.D., of Des Moines.

Henry County

Members of the Henry County Medical Society had as their guest speakers, Tuesday, February 23, Peter A. Bendixen, M.D., of Davenport, and H. A. Keatley, M.D., of Rock Island, Illinois. The two physicians presented a symposium on General and Industrial Surgery.

Ida County

The Ida County Medical Society held its first scientific meeting of the year at Ida Grove, February 18, and it was highly successful. Ten of the twelve members attended. The Canti Cancer film was shown and C. L. Putnam, M.D., of Holstein, presented a paper on Pneumonia, which was well received and discussed by all.

Paul H. Jordan, M.D., Secretary.

Jasper County

Dr. William L. Hearst, of Cedar Falls, councilor of the sixth district, was present and spoke at the meeting of the Jasper County Medical Society, Tuesday, February 2. Dr. Hearst talked on Present Day Problems of Medicine. Another feature of the meeting was an address by J. A. William Johnson, M.D., of Newton, on Postmortem Parturition.

Johnson County

Wednesday, February 3, members of the Johnson County Medical Society met in regular session for a dinner meeting at the American Legion Community

House, after which the following program was presented: Duodenal Diverticula, W. H. Gibbon, M.D., discussion opened by Howard L. Beye, M.D., and Tuberculosis in Childhood, P. C. Jeans, M.D., discussion opened by H. M. Korn, M.D.

Kossuth County Annual Meeting

Dr. Robert A. Evans, of Algona, was elected president of the Kossuth County Medical Society when that organization met Tuesday, February 2, in Algona. Other officers are: Dr. J. G. Clapsaddle, of Burt, secretary and treasurer, and Drs. M. J. Kenefick and C. H. Cretzmeyer, both of Algona, delegate and alternate delegate respectively.

Linn County

On February 11, Fred M. Smith, M.D., of Iowa City, spoke at the dinner meeting of the Linn County Medical Society held at the Hotel Montrose in Cedar Rapids. Dr. Smith's paper was on Rheumatic Heart Disease, and was discussed by Drs. H. R. Hess and F. G. Murray, both of Cedar Rapids. The last half of the scientific program was presented by Arthur W. Erskine, M.D., of Cedar Rapids, who read a paper on the Graham-Cole Test.

T. F. Hersch, M.D., Secretary.

Louisa County

R. R. Goad, M.D., of Muscatine, furnished the scientific part of the program when the Louisa County Medical Society met Thursday, February 11, at Columbus Junction. Twenty-two physicians and wives were present at the six o'clock dinner, after which the women adjourned to the home of Mrs. John Hubbard, and the doctors to the office of Dr. S. J. Lewis, where Dr. Goad read a paper on Eye Diseases.

Mahaska County Annual Meeting

Officers elected at the annual meeting of the Mahaska County Medical Society, held recently in Oskaloosa, are: Dr. F. J. Jarvis, president; Dr. G. H. Clark, vice president; Dr. Leroy F. Catterson, secretary; Dr. L. A. Rodgers, treasurer; Dr. Walter Campbell, delegate; and Dr. B. G. Williams, alternate delegate. All officers are from Oskaloosa.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at Hotel Fort Des Moines, Tuesday evening, February 23. Ninety-three members and guests were present to hear the program and to enjoy the social hour later in the evening. The scientific program consisted of a paper by Frank A. Ely, M.D., on Acute Infective Polyneuritis, which was discussed by H. B. Henry, M.D., and a paper on Heart Sounds, Their Clinical Significance, by Elmer E. Kottke, M.D., which was discussed by George A. Field, M.D. A feature of the program was the showing of the authentic motion pictures of the George Washington Bicentennial Commission, entitled, "George Washington—His Life and

Times." Light refreshments were served to the group, following which a large number remained to play cards and visit.

L. K. Meredith, M.D., Secretary.

Pottawattamie County

Thursday, February 4, the Pottawattamie County Medical Society held an all day meeting at the Edmundson Hospital in Council Bluffs. Members of the hospital staff presented the following clinics: Diphtheritic Paralysis, A. A. Johnson, M.D., discussion by Jack V. Treynor; Severe Injuries of Extremities, F. E. Bellinger, M.D., and Grant Augustine, M.D., discussion by Karl R. Werndorff; Renal Glycosuria, R. M. Rice, M.D., Reaction to Magnesium Sulphate, Christine Erickson Hill, M.D., and Auricular Fibrillation, Vernon L. Treynor, M.D., discussion by Gordon N. Best, M.D. The afternoon program was furnished by William Jepson, M.D., of Sioux City, who read a paper on Gall-Bladder Disease.

Poweshiek County

Aaron C. Conaway, M.D., of Marshalltown, and Edward B. de Silva, M.D., of Rock Island, Illinois, were speakers of the evening at the February 2 meeting of the Poweshiek County Medical Society, when that organization met in Grinnell. Dr. Conaway gave a paper on the Use of Cortin in Addison's Disease, and presented a case report. Dr. de Silva also spoke on this new treatment of an old disease.

Scott County Meetings

The regular monthly meeting of the Scott County Medical Society was held Tuesday, February 2, at the Chamber of Commerce in Davenport. Following a six o'clock dinner, W. W. Duke, M.D., of Kansas City, spoke on Allergy, with Special Reference to Chest Conditions.

A special meeting of the society was called Tuesday, February 23, when Max Cutler, M.D., director of the Tumor Clinic of Michael Reese Hospital, Chicago, and director of the Cancer Clinic at the Veterans Hospital, Hines, Illinois, was present and was the speaker of the evening.

The March meeting was held Tuesday, the first, with the following scientific program being presented: Bright's Disease, Daniel J. Glomset, M.D., of Des Moines, and Hereditary and Environmental Influences on Children, Kenneth Francis, M.D., of Iowa City.

H. A. Meyers, M.D., Secretary.

Tama County

A dinner meeting of the Tama County Medical Society was held Friday, February 19, at Garwin, and Royal F. French, M.D., of Marshalltown, gave an illustrated lecture on Vacationing.

Warren County Annual Meeting

Dr. Robert L. Parker, of Des Moines, and Mr. Vernon D. Blank, also of Des Moines, were present at a meeting of the Warren County Medical Society

held Wednesday, February 3, in Indianola, and spoke on State Society Activities and Legislation. Results of the annual election are: Dr. C. H. Mitchell, of Indianola, president; Dr. Rose Butterfield, of Indianola, vice president; Dr. E. E. Shaw, of Indianola, secretary and treasurer; Dr. J. F. Loosbrock, of Lacona, delegate; and Dr. W. E. Sperow, of Carlisle, alternate delegate.

Woodbury County

L. O. Hoffman, M.D., and C. F. Moon, M.D., members of the medical faculty of the University of Nebraska, were the principal speakers at a meeting of the Woodbury County Medical Society held in Sioux City, Thursday, February 18. Dr. Hoffman spoke on Ante Partum Care, and Dr. Moon on Postpartum Care.

Sioux Valley Medical Association Elects Officers

Dr. P. B. McLaughlin, of Sioux City, was named president of the Sioux Valley Medical Association in the closing session of the two-day convention held in Sioux City, January 25 and 26. Other officers are: Dr. Sidney A. Slater, of Worthington, Minnesota, first vice president; Dr. John Buis, of Pender, Nebraska, second vice president; Dr. E. L. Perkins, of Sioux Falls, South Dakota, third vice president; Dr. Roscoe Jepson, of Sioux City, secretary; and Dr. W. R. Brock, of Sheldon, treasurer.

AUXILIARY NEWS

Polk County

The Woman's Auxiliary to the Polk County Medical Society met January 18 at Younkers Tea Room. Fifty-three women were present to enjoy the luncheon and the bridge game. Mrs. Channing G. Smith of Granger, state president of the organization, spoke briefly of the Iowa State Medical meeting to be held in May at Sioux City. She urged that a large representation from this group be there at that time.

Mrs. A. C. Page, Secretary.

Woodbury Auxiliary Meetings

The Woman's Auxiliary to the Woodbury County Medical Society gave a delightful Christmas party with all of the Christmas trimmings, at the Davidson Tea Room in Sioux City, December 9. Plates were laid for forty. At the close of a musical program, Santa Claus, in costume, distributed gifts from a gaily decorated tree. A silver offering was taken to provide Christmas cheer for the less fortunate.

The Woman's Auxiliary to the Woodbury County Medical Society, entertained the wives of visiting members of the Sioux Valley Medical Society and other guests at a 7 o'clock dinner in the Martin Hotel, Tuesday, January 26, the opening day of the Sioux Valley Medical Convention in Sioux City. Plates were laid for sixty-four. Mrs. H. H. Hagedorn was hostess in charge of general arrangements, Mrs. I. E. Nervig was toastmistress, and Mrs. A. C. Starry had charge of the program.

Mrs. W. E. Cody, president of the local auxiliary, delivered the address of welcome, while Mrs. J. C. Ohlmacher of Vermillion, South Dakota, responded in behalf of the guests. Mrs. Cody introduced Mrs. Channing G. Smith of Granger, president of the Iowa Auxiliary, who spoke briefly of the aims of the state organization. Mrs. Cody also presented each of the visitors by name and address. Mrs. R. W. Perkins and Mrs. P. E. Sawyer responded to toasts; Mrs. Perkins picked out some of the humorous high lights in the routine of answering the doctor's residence telephone, and Mrs. Sawyer sketched the beginning of the local group and its achievements during the nine years of its existence.

A sextette composed of auxiliary members: Mesdames Roscoe Jepson, I. C. Vangsness, E. E. Morgan, C. A. Katherman, F. C. Wheat, and J. W. Schwartz, under the direction of Mrs. S. D. Carney with Mrs. Cody accompanist, presented several vocal selections. Mrs. Schwartz and Mrs. Carney contributed vocal solos. Other local talent, vocal, dancing and reading made up the program. Our guest artist, Mrs. J. C. Ohlmacher, gave an impromptu vocal selection at the close of the prepared program.

INTERESTING NEWS

In Brief

About \$2,500,000,000 is given to philanthropy in this country every year. In 1927, the amount was \$2,100,000,000, so it is safe to assume that there has been that increase in the meantime. Probably only about one-fortieth, speaking very roughly, of all the gifts for philanthropic purposes, come from foundations and endowment boards.

Under the sponsorship of the Parent-Teacher Association of Spirit Lake, and in cooperation with the physicians at this point, a campaign for smallpox vaccination has been recently conducted. Activities of this sort will go far in eliminating the disgraceful morbidity and mortality rate from smallpox in Iowa.

The new Lutheran Hospital at Fort Dodge has been officially opened to the public and is now receiving patients. This \$100,000 institution has completed a staff organization headed by J. F. Studebaker, M.D., president; E. M. Kersten, M.D., vice president; and J. C. Shrader, M.D., secretary and treasurer.

A recent report by the City Health Commissioner of Des Moines, Dr. H. L. Sayler, indicates that during 1931 no deaths from typhoid fever, measles or scarlet fever were reported. Deaths from tuberculosis were fewer than at any time during the last five years.

A recent survey conducted by government authorities of the three veterans hospitals indicated that 319 cases of cancer were present among the patients. It appears significant that 52 of these cancer victims presented a history of cancer on one or both sides of the family.

Section two of the Iowa White House Conference's public health service administration recently completed its organization with the appointment of Dr. M. E. Barnes, of Iowa City, and Dr. J. F. Edwards, of Ames, as co-chairmen of the section.

The committee on drug addiction of the National Research Council has granted \$14,220 for research work to be conducted at the University of Michigan this year. This work is being done under the direction of C. W. Edmunds and Nathan B. Eddy.

The Cancer Institute in the University of Minnesota Hospital is leading an effective fight against cancer in Minnesota according to a recent survey made by the American Medical Society for the Control of Cancer.

The new Veterans Bureau Hospital for Iowa has definitely been located in Des Moines, and the Jones tract at Thirtieth Street and Euclid Avenue selected for the erection of this \$1,300,000 hospital.

The Nobel prize in medicine and physiology for 1931 was awarded to Professor Otto Warburg, head of the department of biology of the Kaiser Wilhelm Institute, for his work on cellular metabolism.

A \$20,000 addition to the University Children's Hospital at Iowa City was completed recently. The new wing will house the orthopedic clinic, the dental clinic, the drug department and the business office.

The Cass County Public Health Association at its recent annual meeting elected H. A. Johnson, M.D., president; O. R. Patrick, M.D., vice president, and Mary McVey, secretary-treasurer.

Of the 126,440 physicians listed in the American medical directory, only 72,160 have found it desirable to apply for license to prescribe alcoholic beverages.

Ewen M. MacEwen, professor of anatomy, University of Iowa College of Medicine, Iowa City, has been appointed head of the department to succeed the late Henry J. Prentiss.

Erwin von Graff has been appointed professor of obstetrics and gynecology at the State University of Iowa College of Medicine, Iowa City.

PERSONAL MENTION

Dr. George A. Plummer, of Cresco, returned recently after a two months' European trip, during which time he took work in the surgical clinics of the University of Vienna and the University of Berlin.

Dr. P. W. Van Metre, of Rockwell City, addressed the Hardy Parent-Teachers Association Thursday, January 28, on "Immunization for Diphtheria."

Dr. R. H. Foster, formerly of Auguilla, Mississippi, has purchased the office equipment of Dr. D. D. Davis in Onawa, and Dr. Davis is planning to return to Nebraska. Dr. Foster has for many years been working with the Central Louisiana Hospital in Pinesville.

Dr. W. E. Ash has been elected president of the Council Bluffs Clinic to succeed the late Dr. Donald Macrae. Dr. A. A. Johnson was elected vice president; Dr. C. A. Hill, treasurer, and Dr. Christine Ericksen Hill, secretary.

Dr. John F. Herrick, of Ottumwa, addressed the Y. M. C. A. Hygeia Club, Thursday night, January 28, on the subject, "The Nervous System."

Dr. Martin J. Ryan, of Sioux City, has announced the association of Dr. John S. Tracy with him in the practice of general medicine and surgery.

Dr. Granville N. Ryan, of Des Moines, spoke before the Mitchellville Parent-Teachers Association, Monday, January 25, on the subject, "Modern Youth as Seen by a Physician."

Dr. Orlo Wm. Hardy, formerly of Idaho, will locate in Millersburg, which has been without a physician since Dr. Amick went to Sac City. Dr. Harvey is a recent graduate of the State University of Iowa, and has spent two years as an interne in a Salt Lake City hospital.

Dr. Arthur W. Erskine, of Cedar Rapids, was one of the principal speakers at the fifty-third annual convention of the Iowa Pharmaceutical Association, held in Cedar Rapids, Tuesday, February 16. Dr. Erskine spoke on "Cooperation Between Physicians and Pharmacists."

Dr. H. A. O'Neal, of Chicago, was in Tipton recently making arrangements to take over the office equipment and practice of Dr. W. H. Jenks. At present Dr. O'Neal is associated with the University of Illinois as senior resident in surgery.

Dr. Frank M. Fuller, of Keokuk, was the speaker of the evening at the Boy Scout Anniversary Week banquet, held in Fort Madison Thursday, February 11.

Dr. T. J. Greteman, formerly of Alta Vista, has located in Cresco, where he will continue in the practice of medicine and surgery.

Dr. Evon Walker, of Ottumwa, delivered the weekly health talk over radio station WIAS, taking for his subject, "Heart Disease."

MARRIAGES

The wedding of Miss Helen Neu, of Pocahontas, and Dr. T. J. Greteman, of Cresco, took place Monday, February 8, in the Catholic Church at Kasson, Minne-

sota. Immediately following the ceremony, a breakfast was served at the home of the bride's sister, after which Dr. and Mrs. Greteman motored to Cresco, where the doctor is entering the practice of medicine.

DEATH NOTICES

Dean, Willis Warren, of Sioux City, died February 13, at the age of sixty as the result of leukopenia. He was graduated in 1895 from the University of Nebraska College of Medicine, and at the time of his death was a member of the Woodbury County Medical Society.

DeLano, Albert Henry, of Lone Tree, died February 5, at the age of seventy-eight as the result of an attack of uremic poisoning some time ago. He was graduated in 1887 from the State University of Iowa College of Medicine and had long been a member of the Johnson County Medical Society.

Warren, John Nelson, formerly of Sioux City, and more recently of California, died February 20, at his home in Los Angeles, after a short illness, at the age of eighty-six. He was graduated in 1871 from the Miami Medical College, Cincinnati, and had been an active member of the Woodbury County and Iowa State Medical Societies up to the time of his removal to California. Dr. Warren served the Iowa State Medical Society as president in 1918.

AMERICAN COLLEGE OF PHYSICIANS TO AWARD PRIZE TO DR. O. T. AVERY

The American College of Physicians recently selected Dr. O. T. Avery of the Hospital of the Rockefeller Institute of New York City as the recipient of the John Phillips Memorial Prize for 1932.

This prize, an annual award by the College in the sum of \$1,500, is given to perpetuate in the College the memory of Dr. John Phillips of Cleveland, a man of outstanding accomplishments as investigator, teacher and physician, for many years a member of the board of regents of the American College of Physicians, who gave his life in saving others on the occasion of the Cleveland Clinic disaster on May 15, 1929.

The committee on the John Phillips Memorial Prize, through its chairman, Dr. James H. Means of Boston, recommends the award, "To Dr. O. T. Avery for the series of studies upon the pneumococcus in which he has played a leading role, beginning with the discovery of the type-specific soluble capsular polysaccharides and culminating in the discovery of a bacterium producing an enzyme which splits the polysaccharides of Type 3 pneumococcus in vitro, thus rendering it susceptible to phagocytosis and thereby protecting the animals infected with it."

The sixteenth annual clinical session of the College will be held in San Francisco during the week of April 4, 1932. Dr. Avery will deliver an address, "The Role of Specific Carbohydrates in Pneumococcus Infection and Immunity," at the convocation on Wednesday evening, April 6. At the conclusion of

Dr. Avery's address, the prize will be presented to him by Dr. S. Marx White of Minneapolis, president of the College.

The distinction of this award is enhanced by the fact that although it was available the previous year, it was not possible to decide on a suitable recipient. This is, therefore, the first award made. It is the hope of the officers and members of the College that this annual prize in memory of a distinguished colleague may, by recognizing merit, be a continuing stimulus to investigators in those subjects having a direct bearing on the advancement of clinical science.

BAKER LOSES SUIT AGAINST AMERICAN MEDICAL ASSOCIATION

A verdict in favor of the American Medical Association was returned March 3 by a federal court jury in the half million dollar libel suit filed against the association by Norman Baker, of Muscatine. The medical association did not deny the publication of articles in criticism of Baker and his methods of treating cancer, basing the defense on qualified privilege and fair comment. In rendering the verdict, the court assessed all trial costs to Baker.

DR. RUTTIN TO GIVE COURSE IN DISEASES OF THE EAR

The coming of Dr. Eric Ruttin, of Vienna, to America this spring, to give his course in Diseases of the Ear, has aroused a great deal of interest among the otologists of Iowa. As many of our Iowa men who have had work under Dr. Ruttin in Vienna will amply and enthusiastically testify, he probably has no superior anywhere in the teaching of otology and its various branches. Among the midwestern cities so honored, Des Moines is particularly fortunate in being given a full week of Dr. Ruttin's time.

The course will be given April 4 to 8, inclusive, and the fee will be \$50.00 for each member. The class will necessarily be limited to twenty members, and as about fifteen have already signified their intention of taking the work, there are but few vacancies left. Those wishing to take advantage of this unusual opportunity should therefore get their applications in at once. Dr. C. L. Chambers, 903 Equitable Building, Des Moines, who is arranging the course, will be very glad to give more detailed information to any inquiring otologist.

THE AMERICAN BOARD OF STOMATOLOGY

A group of dentists and physicians in New York has applied for a charter on which to found an "American Board of Stomatology," similar to boards established in the specialties of otolaryngology and obstetrics and gynecology. Stomatology is defined as "the branch of medical science which treats of the anatomy, physiology, pathology, therapeutics and hygiene of the oral cavity, the tongue, teeth and adjacent structures and tissues, and the relationship of this field to the entire body." The board is intended as a liaison organization between medicine and dentistry.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. McCLINTOCK, Iowa City

Professor Robert Koch in Iowa in 1908



Adolph Koch

Mrs. Robert Koch

Henry Koch
Mrs. Adolph Koch

Dr. Robert Koch

In celebration of the fiftieth anniversary of Robert Koch's announcement of the tubercle bacillus, the National Tuberculosis Association will distribute in booklet form a special translation of the original article, published March 24, 1882, in the *Berliner Klinische Wochenschrift* (Volume 19, pages 221-230, 1882). This booklet is to be presented to members of senior medical classes and special societies throughout the country.

It is interesting in this connection to recall that twenty-four years ago in May, 1908, Dr. Robert

Koch visited for several days with his brother, Mr. Adolph Koch and family, on a farm two miles southwest of Keystone, Iowa. We are indebted to Dr. O. W. King, now practicing urology in Des Moines, but in 1908 a general practitioner at Keystone, for the particulars of this visit and the group photograph published herewith. In the group are Dr. and Mrs. Robert Koch, Mr. and Mrs. Adolph Koch and another brother, Mr. Henry Koch, a grocer of St. Louis.

Doctor King was privileged to have two personal

interviews with the distinguished scientist, once while visiting a patient in the vicinity, and again on the Sunday afternoon when the photograph was taken. As Doctor King owned the only automobile in the town, he was asked to bring the local barber who had a good camera, to take the family picture. The professor protested strongly at first, but finally consented after exacting a promise that only a limited number of copies should be developed. He avoided all contact with newspaper reporters and frowned on any publicity, so that very few knew of his visit. Doctor King states that his personality was pleasing and he had a ready knowledge of the English language.

Doctor Koch was on his way to Japan, having landed in New York on April 7. While this was his first visit to the United States, it was to be a tour of rest and recreation, so he refused all special receptions and invitations, accepting only the dinner given in his honor by the German Medical Society of New York, on April 11, 1908.* It was at this dinner that Dr. William H. Welch alluded to an interesting personal recollection, to a time (1875) when bacteriology was in its infancy, and while Welch was working in Cohnheim's laboratory in Breslau. He told how Koch, the unknown, then thirty-two years old, came there from a little town in Posen to show Cohnheim his work on anthrax, published

the following year. After being closeted with Koch for a long time, Cohnheim later told Welch and his co-workers Weigert and Ehrlich, "There is a great man of whom we will hear much in the future."

For the many encomiums of praise spoken at the dinner, Koch in simple words, expressed his appreciation of the remarkable reception adding modestly, that he thought himself fortunate to have sometimes found the gold among the gravel of the road which is open to everyone."

Upon his return from Japan he again visited this country, attending the International Congress on Tuberculosis, held in Washington, D. C., September 28th to October 3, 1908, where he received a great ovation.

During the following year his health began to fail, and the career of the world renowned investigator came to an end on May 27, 1910, at the age of 66 years.

Soon after coming to Berlin in 1880 as Director of the Royal Institute of Infectious Diseases, Koch instituted a series of courses in practical bacteriology. One of the first Iowa physicians to take this course in 1885 was Dr. Lawrence W. Littig, later a member of the medical faculty at the State University. This distinctly stimulated an interest in the new science at the university and led to the establishment of the Chair of Pathology and Bacteriology in 1892, one of the first in the middle west.

W. L. B.

*Journal A. M. A. Vol. 50. No. 16. April 18, 1908, p. 1275.

Two Iowa Practitioners Fifty Years in the Same Town

At least worthy of note is the fact that two Iowa physicians, Doctors Daniel J. Townsend and John W. Craig, have practiced fifty years in the same town. If it be considered a mark of distinction to celebrate one's golden wedding, where the celebrants have solemnly promised before authority, to "love and cherish" each other, even more distinctive it surely is for two medical men, with the many chances gossiping tongues provide for offense, to still hold each other in high esteem after being close neighbors and discerners of each other's weak points for lo! these many years!

Not succeeding in making these modest, unassuming men write about themselves (they being so busy tending to their own business as per custom), the writer drove down to Lohrville the other night and by diligent questioning, gleaned a few facts about this record.

Doctor Townsend is the son of John Townsend, a Vermonter, a Green Mountain Yankee, and Sarah Valentine, of Scotch-Dutch parentage. Born in Princeton, Bureau County, Illinois, he came to Iowa in 1866. He went through the grade schools of Sheffield, Illinois, attended high school in Vic Doliver, Fort Dodge, then taught school in Webster county, and was later school superintendent at Day-

ton, Iowa. He studied medicine at the College of Physicians and Surgeons, Keokuk, in 1879-80. He was graduated from the Medical Department of Drake University, and demonstrator of anatomy there one term. He came to Lohrville, August 8th, 1881, and jokingly says he has been too poor ever since to get away. Doctor Townsend has been interested in every worthy community endeavor, has been a member of the school board, three times mayor of his home town, a member of the county board of supervisors three years, and was honored by being elected a member of the 28th and 29th General Assemblies. He has been the local surgeon of the Chicago, Great Western Railway since 1902, and was one of the organizers and a charter member of the American Association of Railway Surgeons at Chicago in 1907.

It is believed that Doctors Craig and Townsend did the first appendectomy in Calhoun County. When asked about his early day experiences, Doctor Townsend said: "We never thought anything rare or unusual. We took care of everything as it came along." When asked how he and Doctor Craig got along so well, he said: "We never had a quarrel, though we didn't always exactly agree. The Doctor was a pretty sensible sort of a man. I always thought he was try-

ing to do what was right and I guess he thought I was. When I needed help I called Doctor Craig and when he needed help, he called me."

Dr. Townsend was wedded to Myrtle Hawthorn of New Brunswick, to which union there were born four children, Irvin, now at home, crippled with infantile paralysis; Blanche, a nurse with the Chicago Tribune; Orville, a power and construction engineer in Missouri; and DeWitt, in the post office department, Chicago terminals.

John W. Craig was born at Canton, Fulton County, Illinois, in 1858, the third of eight children of Sinnett R. Craig and Harriett Cochrane Craig, who had moved west from Indiana. His early education besides the country schools, was at Mitchellville Seminary (now the girls' reform school) in 1874 and 1875, and in 1876 he attended Simpson College. He began his medical studies at Keokuk in 1878, and was graduated in 1881. Doctor J. C. Hughes was then in his prime at Keokuk. Besides his wonderful personality and rare ability as an orator, Doctor Hughes was a skillful surgeon, on a par with Maxwell at Iowa City, they being the leading surgeons of the middle west. Doctor Craig came to Lohrville on Thanksgiving Day, 1881, on a hand car from Gowrie, rail head of the Northwestern. He found the town in a cornfield, with no sidewalks and no dwelling houses but a little hotel which still stands today. It was a wet season in a wet country though not Volstead, but drain tile changed that situation. Then followed the terrible blizzards of 1881 when people were shut in all winter. Driving on top of the frozen snow over the tops of barb wire fences was an ordinary experience.

When asked about the type of practice, Doctor Craig also said it was just whatever came along. Surgery was at a minimum, some of it being done by Lewis Schooler and J. T. Priestley at Des Moines. The hard times of those days did not worry the doctor. Of course renters moved on and forgot to pay their bills but manufactured goods were on a par with raw materials. People were not so expensive or expansive those days. There were only two buggies in the township. Inquiring about Doctor Townsend as a competitor (they were never partners), the reply was: "We got along just fine. Dr. Townsend was a good man, always has been. I'm not much to quarrel with anyone myself. We worked together. Doctor Evans used to come over from Gowrie in counsel and Doctor J. D. McVay and Doctor Stewart, both good general practitioners, came over from Lake City." The County Medical Society began to function about 1885. Besides those named, others active in it were Martin of Pomeroy, and Speaker of Manson.

When asked about other activities, Doctor Craig said his hobby was to practice medicine. (He denied that he was literary or scientific, though it has been the proud boast of the Calhoun County Medical Society that he can write as finished a scientific paper as any man in the state.) He advised against too much reading for a country doctor. Said he had "better

get out and bull into it like the rest." Doctor Craig was married in 1882 to Maria Powers of this county, and four children were born to this union.

It has been the privilege of the writer to see something of the home life of both these physicians and it is very evident that the equanimity therein, has contributed largely to the lifelong success and happiness enjoyed by these rural practitioners. It would be remiss to fail to mention that they are the manner of men every physician would choose to think typical of the American profession. Their standards of practice, viewed from any angle, are such as any young medico of 1932 could well emulate. They neither lean on nor disdain the laboratory; the dishonest dollar easily earned in the twilight zone of medical respectability does not tempt them; they support organized medicine by regular attendance at medical meetings. May their tribe increase.

At its December meeting, the Calhoun County Society honored these physicians at a testimonial dinner and presented each of them a pen and desk set, Sheaffer lifetime variety.

P. W. Van Metre, M.D., Secretary.

DETROIT'S MEDICAL RELIEF FUND

Physicians of Detroit, through the Wayne County Medical Society, have been requested to cooperate with the mayor's emergency unemployment committee. Dr. Simon P. L'Esperance, of Detroit, has been appointed liaison member of this committee. In this capacity, Dr. L'Esperance will act as chairman of the medical relief committee of ten to supervise the medical service and to supplement the department of public welfare and the city physician's office in providing medical relief for the unemployed families of Detroit. This plan has received the approval of the Wayne County Society and all members of the Society will be requested to cooperate in the movement. According to their plans the hygienic and sanitary living conditions will be checked and acutely ill persons will be hospitalized. A centrally located office will act as a clearing house for all patients so that the deserving will receive prompt attention and accurate records and reports combined. The expense for the operation of this committee will be met by lay philanthropy.

A ROYAL ILLNESS

From an exchange we learn that the recent illness of King George V of Great Britain cost the royal exchequer about \$200,000. The leading medical adviser, Lord Dawson, of Penn, presented a bill for \$50,000, and Stanley Hewitt received \$2,500 a month. Even the bacteriologist had a bill for \$10,000 for a few x-ray treatments. The nurses received a bonus of \$500 each when they were dismissed. The ventilating system for the royal bedchamber cost \$20,000. When the majority of our English confreres who are having difficulty in making both ends meet learn of the enormous fees paid to two or three medical attendants upon the king it seems to us that there must be a little envious feeling developed.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

***ALLERGY AND APPLIED IMMUNOLOGY**—(A Handbook for Physician and Patient)—By Warren T. Vaughan, M.D.—359 pages, illustrated.—The C. V. Mosby Company, St. Louis, 1931.—Price, \$4.50.

***CAUSATION, DIAGNOSIS AND TREATMENT OF CANCER**—(The Beaumont Foundation Lectures, Series Number Ten)—By James Ewing, M.D., Professor of Pathology, Cornell University Medical College—87 pages—The Williams & Wilkins Company, Baltimore, 1931.—Price, \$1.00.

***HAUTKRANKHEITEN UND ERNÄHRUNG**, mit Berücksichtigung der Dermatosen des Kindesalters.—By Doz. Dr. Erich Urbach.—Publisher, Wilhelm Maudrich, Vienna, 1931. (English Translation in preparation.)

***HOW'S YOUR BLOOD PRESSURE?**—By Clarence L. Andrews, M.D., Medical Chief, Atlantic City Hospital.—225 pages.—The Macmillan Company, New York, 1930.—Price, \$2.50.

***LIVING THE LIVER DIET**—By Elmer A. Miner, M.D.—With Introduction by William P. Murphy, M.D.—106 Pages.—The C. V. Mosby Company, St. Louis, 1931.—Price, \$1.50.

***MEDICAL CLINICS OF NORTH AMERICA**—(Chicago Number—November, 1931)—Vol. xv, No. 2—227 pages with 53 illustrations.—(Issued serially, one number every other month.)—Per clinic year, July, 1931, to May, 1932—paper, \$12.00; cloth, \$16.00 net.—W. B. Saunders Company, Philadelphia and London, 1931.

***SIMPLIFIED DIABETIC MANAGEMENT**—By Joseph T. Beardwood, Jr., M.D., F.A.C.P.; and Herbert T. Kelly, M.D., A.A.C.P., Associates in Cardiology, Graduate School of Medicine, University of Pennsylvania. 191 pages, illustrated. J. B. Lippincott Company, Philadelphia, London, Montreal, 1931. Price, \$1.50.

***THE SURGICAL CLINICS OF NORTH AMERICA**—(Issued serially, one number every other month.) Volume 11, No. 5. (Pacific Coast Surgical Association Number—October, 1931.) 279 pages with 109 illustrations. Per clinic year (February, 1931, to December, 1931.) Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London, W. B. Saunders Company, 1931.

***SURGICAL PATHOLOGY OF THE DISEASES OF BONES**—By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. 272 pages with 211 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1931.

***TABLES OF FOOD VALUES**—By Alice V. Bradley, Supervisor and Instructor of Nutrition and Health Education, Santa Teachers College, Santa Barbara, California. The Manual Arts Press, Peoria, Ill., 1931. Price, \$2.00.

***THEORIE UND PRAXIS DER KREBSKRANKHEIT**—By Privatdozent Dr. Felix Mandl, Assistent der II. Chirurgischen Universitäts-Klinik in Wien.—144 pages, with 28 illustrations.—Published by Wilhelm Maudrich, Vienna, 1932.

***WHAT THE PUBLIC SHOULD KNOW ABOUT CHILDBIRTH**—By Walker B. Gossett, M.D. Midwest Company, Minneapolis, 1931. Price, \$2.00.

*Review appears in this issue.

BOOK REVIEWS

ALLERGY AND APPLIED IMMUNOLOGY (A Handbook for Physician and Patient)

—By Warren T. Vaughan, M.D.—359 pages, illustrated. The C. V. Mosby Company, St. Louis, 1931. Price, \$4.50.

One of the most widely discussed topics in medical practice today is the far reaching manifestation of allergic conditions. While the subject itself is not new, the modern conception and understanding of this subject is new and the developments in this branch of practice have been most thorough and far-reaching.

A number of texts have recently appeared dealing with various phases of the subject. Dr. Vaughan's book fills a most unique need and because of its non-technical presentation is one of the most useful books of this group. Dr. Vaughan has prepared this book on allergy as a reference manual for physicians and as a handbook for intelligent patients in following the instructions and orders of the physicians. It stands in the field of allergy in the same position as the numerous manuals prepared for patients in the field of diabetes.

To the average physician, the text will present the subject of allergy in a readily comprehensible form, shorn to a large extent of technicalities and abstract theories. The book is entirely practical and as such presents its material in the most useful form. For the physician not engaging in research or specializing in the field of allergy, this volume, according to our standard of appraisal, is the most useful one which has yet appeared in this particular field, presenting as it does the entire subject including diagnosis and treatment in less than four hundred pages of text matter. The volume is illustrated.

CAUSATION, DIAGNOSIS AND TREATMENT OF CANCER

(The Beaumont Foundation Lectures, Series Number Ten)—By James Ewing, M.D., Professor of Pathology, Cornell University Medical College—87 pages. The Williams & Wilkins Company, Baltimore, 1931. Price, \$1.00.

There is perhaps no single subject of medical importance which has received the same attention and publicity as has cancer in its many aspects. Several important contributions have recently been made to the sum total of our knowledge regarding cancer and during the past year at least one other volume has been prepared by a competent observer summarizing and epitomizing our knowledge of cancer. It has not been our pleasure, however, to review so condensed a resumé of the subject as that presented by Dr. James Ewing.

In the eighty pages of his small monograph he has covered in a very satisfactory way our demonstrated knowledge of the causation of cancer, the various methods for the early recognition of malignant processes, and in a third section he has presented the positive knowledge which we have attained dealing with the treatment of these conditions. The book is surprisingly devoid of speculation, and unproved theories are given no more than passing attention.

For the busy practitioner who wishes to be abreast on this subject through a couple of hours of pleasant reading, this volume is recommended without reservation. This discussion was presented as Series No. 10 of the Beaumont Foundation Lectures.

HAUTKRANKHEITEN UND ERNAHRUNG

Mit Berücksichtigung der Dermatosen des Kindesalters. By Doz. Dr. Erich Urbach. Publisher, Wilhelm Maudrich, Vienna, 1931. (English translation in preparation.)

Skin disease and nutrition with reference to the dermatosis of childhood: This volume deals with nutrition and the various idiosyncrasies that some children have to certain foods, as are manifest by various skin lesions. The allergic basis for many dermatosis is set forth. The volume is short and well written.—N. B. A.

HOW'S YOUR BLOOD PRESSURE?

By Clarence L. Andrews, M.D., Medical Chief, Atlantic City Hospital—225 pages. The Macmillan Company, New York, 1930. Price, \$2.50.

During the past decade, the laity has become blood pressure conscious and, in most instances, their worries and fears are based upon inaccurate or incomplete information. This book is written primarily for the layman who has become a victim of the blood pressure complex, or who, because of hearsay or misinformation, lives in constant fear of impending calamity. The author discusses in orderly fashion the physiology of the circulation, the methods of taking blood pressure readings, and finally, the factors affecting blood pressure. In his concluding chapters he gives suggestions relative to general procedures in daily living which may remotely affect blood pressure. Throughout the volume the author stresses the safety factors of the body offsetting blood pressure fluctuations. This book is written in a very readable fashion and will go far in correcting the blood pressure complex.

LIVING THE LIVER DIET

By Elmer A. Miner, M.D. With introduction by William P. Murphy, M.D.—106 pages. The C. V. Mosby Company, St. Louis, 1931. Price, \$1.50.

In this small volume of about one hundred pages the author has crowded many valuable recipes of particular use to those following the Minot-Murphy diet for pernicious anemia. The author of the volume is himself a sufferer of pernicious anemia and his presentation of this subject is quite thorough since it represents both the attitude of the physician and an intelligent patient. This discussion is not limited to food formulae containing liver but deals largely with the other elements which must be combined with liver in order to render the diet well-balanced. Because of the thoroughness of his discussions the volume will be found entirely safe and helpful to place in the hands of a patient suffering from pernicious anemia and will assist him materially in continuing the liver management.

To the physician the volume presents the necessary information relative to the administration of liver so that he can instruct his patient specifically relative to the dietary treatment.

"After all is said and done, the things that count are right living, right diet, and right thinking. Then rightfully follow health, longevity, and happiness."

MEDICAL CLINICS OF NORTH AMERICA

(Chicago Number—November, 1931).

Vol. xv, No. 2. 227 pages with 53 illustrations. (Issued serially, one number every other month.) Per clinic year, July, 1931, to May, 1932—paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London, 1931.

This number of the clinics deals largely with unusual or rare conditions. An exception to this statement is furnished in the clinics by Dr. Keeton, entitled, "Some Things Every Physician Should Know About Diabetes;" that of Dr. Portis on "Ulcers of the Stomach and Duodenum," and that by Dr. Foley on "Gall-bladder Disease." These three papers dealing with common conditions are in themselves fully worth the cost of the book.

The remaining papers discuss such conditions as myelogenous leukemia, skin syphilis, fetal peritonitis, Banti's Syndrome, and other diseases. The volume is well illustrated.

SIMPLIFIED DIABETIC MANAGEMENT

By Joseph T. Beardwood, Jr., M.D., F.A.C.P.; and Herbert T. Kelly, M.D., A.A.C.P., Associates in Cardiology, Graduate School of Medicine, University of Pennsylvania. 191 pages, illustrated. J. B. Lippincott Company, Philadelphia, London, Montreal, 1931. Price, \$1.50.

The material in this book has been divided into three chapters. The first is entitled "History and General Consideration of Diabetes," and is intended to set forth only the essentials which every diabetic should know to intelligently cooperate in the management of his case. The second chapter, "Modern Conception and Diagnosis of Diabetes," is a comprehensive review of the symptoms, diagnosis and treatment of diabetes, including the indications for and regulations of insulin administration and two types of diet regulation, the older percentage system and the newer unit system are described and outlined. The complications of diabetes are discussed together with their prophylactic and general treatment. Chapter three entitled, "Unit Method Charts," is a further elaboration of this method of diet control together with various recipes and suggested menus.

It also attempts to cover a rather wide field of diabetic complications, such as emergency and elective surgery, obesity, tuberculosis, nephritis, nephrosis, hyperchloridia, gastritis, peptic ulcer, colitis, diarrhea, cardiac decompensation and biliary diseases.

E. B. W.

THE SURGICAL CLINICS OF NORTH AMERICA

(Issued serially, one number every other month.) Volume 11, No. 5. (Pacific Coast Surgical Association Number, October,

1931.) 279 pages with 109 illustrations. Per clinic year (February, 1931, to December, 1931). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London, W. B. Saunders Company, 1931.

This number has many contributors from the various medical centers on the Pacific Coast and consists of a variety of case reports, most of them of rather unusual cases. The most comprehensive article is by Dr. W. A. Taylor on a ruptured duodenal ulcer with a rather complete review of the subject and reports of cases.

The volume conforms to the usual style and make-up of the series and in every way maintains the same high standard of scientific presentation.

SURGICAL PATHOLOGY OF THE GENITO-URINARY ORGANS

By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. 286 pages with 222 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1931. Price, \$5.00.

The author has presented in this book a very interesting portrayal of genito-urinary pathology in its simplest form. He accomplishes this in part at least by entering into a spirit of sarcastic banter with the pathologist and urologist who are accused of making it complicated and not easily understood. The oddity of his expressions and his keen sense of humor lend a charm which cannot be denied. The brusque, terse manner of his expressions are always uppermost throughout the entire volume.

It is evident that this treatise is the end result of a tremendous amount of clinical experience and hard work gained by a general surgeon who places a premium on the study of gross pathology. The microscope is employed secondarily to substantiate his views; the caution is given that especially the high powered lens is prone to beget difficulties and that a certain amount of ignorance is preferable to that of too much scientific knowledge when applied to the welfare of the patient. It is hard to agree with the author that primary tuberculosis of the ureter or bladder does occur independently to that of the kidney or pelvic structures. A bold stand is taken on the classification of kidney tumors.

This volume is invaluable. All practitioners of the art of medicine can do well to place it in their libraries, easily accessible for quick reference. A short summary of the carefully selected literature follows each chapter. Numerous single tone illustrations of photographs as well as microscopic sections are given.

W. R. H.

TABLES OF FOOD VALUES

By Alice V. Bradley, Supervisor and Instructor of Nutrition and Health Education, State Teachers College, Santa Barbara, California. The Manual Arts Press, Peoria, Ill., 1931. Price, \$2.00.

During the past decade there has been a revival of

interest in dietetics, stimulated by the researches particularly in the treatment of diabetics, pernicious anemia and the chronic forms of nephritis. Every physician today must be prepared to carefully outline appropriate diets for his patients and advise them relative to the caloric values of various food substances.

This volume presents authentic, inclusive and practical food tables, giving all necessary information for the guidance of physicians in understandable and condensed form. The tables, indicating the food composition and food values of 100 gram portions of various foods, will be found especially useful to the general practitioner, since these tables furnish a unit of measurement which is easily appreciated by the patient, unaccustomed to dietary regime. In connection with the various tables the author has furnished suggested menus and recipes suitable to the special need of selected cases.

It is surprising to the reviewer that this comprehensive manual can be offered to the physician for \$2.00.

THEORIE UND PRAXIS DER KREBSKRANKHEIT

By Privatdozent Dr. Felix Mandl, Assistent der II. Chirurgischen Universitäts—Klinik in Wien. 144 pages, with 28 illustrations. Published by Wilhelm Maudrich, Vienna, 1932.

This very small volume contains a clear and concise discussion of cancer, as viewed by the continental medical men. It is not filled with boresome detail and the information is readily followed. The text is the result of the author's own observations at the II Surgical Clinic in Vienna, and is chiefly intended for students. It is well worth while to anyone interested in carcinoma.—N. B. A.

WHAT THE PUBLIC SHOULD KNOW ABOUT CHILDBIRTH

By Walker B. Gossett, M.D. Midwest Company, Minneapolis, 1931. Price, \$2.00.

Authentic surveys have indicated that the mortality rate among mothers in the United States due to childbirth is needlessly high. The United States stands twentieth in a list of all nations regarding mortality from childbirth and it is the belief of the author of this volume that this rate can be materially changed if the public be directly informed as to many of the obstetrical problems which arise so that they in turn will insist upon better service, both at the time of delivery and in the convalescent period. He discusses this problem from the standpoint of the past development of this branch of medical science and with a knowledge of the various problems and complications of childbirth and the methods of treatment or prevention which have been established as efficient in these conditions. The book will be of value to physicians, public health workers, and the intelligent laity.



Channing G. Smith, M. D.

President

Iowa State Medical Society

1931-1932

The JOURNAL

of the

Iowa State Medical Society

VOL. XXII

DES MOINES, IOWA, APRIL, 1932

No. 4

IOWA STATE MEDICAL SOCIETY
Organized 1850

Eighty-first Annual Session

Sioux City, Iowa, May 4, 5, 6, 1932

Do not fail to Register. Registration Bureau—Masonic Temple

PROGRAM

OPENING EXERCISES

Wednesday, May 4
8:15 a. m.

Call to Order by the President—

CHANNING G. SMITH, M.D., Granger

Prayer—

REV. GEORGE C. PULLMAN,
First Congregational Church, Sioux City

Addresses of Welcome—

MAYOR OF SIOUX CITY
E. C. COBB, M.D., Sioux City
President, Woodbury County Medical Society

Response—

J. FRED CLARKE, M.D., Fairfield
Second Vice President, Iowa State Medical Society

SCIENTIFIC PROGRAM

Wednesday, May 4
8:30 a. m.

1. Medical Clinic—
HENRY L. ULRICH, M.D., Minneapolis, 8:30-9:15
2. Surgical Clinic—
DEAN D. LEWIS, M.D., Baltimore, 9:15-10:00
3. Significant Laboratory Tests for the General Practitioner—
MARY H. SWAN, M.D., Chicago, 10:00
4. Glomerular Nephritis—
JOHN L. KESTEL, M.D., Waterloo, 10:20

5. Hypertensive Kidney—

WALTER CARY, M.D., Dubuque, 10:40

6. Tuberculosis of the Kidney—

JAMES C. DONAHUE, M.D., Centerville, 11:00

7. Perinephritic Abscesses—

RAY A. FOX, M.D., Charles City, 11:20

Discussion of 3—H. L. VAN WINKLE, M.D., Cedar Rapids
Discussion of 4 and 5—H. P. MOEN, M.D., West Union
Discussion of 6 and 7—C. R. HARKEN, M.D., Osceola

Wednesday, May 4

1:30 p. m.

8. Address in Medicine—Pulmonary Arteriosclerosis—A new clinical tripod—
HENRY L. ULRICH, M.D., Minneapolis
 9. Present Day Knowledge of Cell Formation and Pathology—
HAL DOWNEY, Professor of Anatomy, College of Medicine, University of Minnesota, Minneapolis 2:00
 10. Indications for Splenectomy—
ALFRED A. EGGLESTON, M.D., Burlington, 2:30
 11. Anemias in Children—
JAMES E. DYSON, M.D., Des Moines, 2:50
 12. The Significance of Blood Findings in Surgical Conditions—
C. ERICKSEN-HILL, M.D., Council Bluffs, 3:10
Discussion of 10—S. D. MARTIN, M.D., Carroll
Discussion of 12—E. B. DAWSON, M.D., Fort Dodge
- Summary by Medical Guest—
HENRY L. ULRICH, M.D., Minneapolis, 4:15

Wednesday Evening, May 4**Masonic Temple**

7:30

Entertainment and Smoker

Thursday, May 5

8:30 a. m.

13. Surgical Clinic—
DEAN D. LEWIS, M.D., Baltimore, 8:30-9:15
14. Medical Clinic—
HENRY L. ULRICH, M.D., Minneapolis, 9:15-10:00
15. Clinical Neurology and the General Practitioner—
TOM B. THROCKMORTON, M.D., Des Moines, 10:00
16. Indications for Sympathectomy in Angina Pectoris—
WALTER D. ABBOTT, M.D., Des Moines, 10:20
17. Psychoses of Pregnancy—
ROY E. CROWDER, M.D., Sioux City, 10:40
18. The Treatment of Syphilis of the Central Nervous System—
CHARLES C. COLLESTER, M.D., Spencer, 11:00
Discussion of 15—CLARENCE E. VAN EPPS, M.D., Iowa City
Discussion of 16—B. RAYMOND WESTON, M.D., Mason City
Discussion of 17—ROBERT A. STEWART, M.D., Independence.
Discussion of 18—JOHN M. POPE, M.D., Cherokee

Thursday, May 5

1:30 p. m.

19. Address in Surgery: Fundamental Knowledge of Cancer—
DEAN D. LEWIS, M.D., Professor of Surgery, Johns Hopkins Medical College, Baltimore
20. Early Diagnosis of Cancer of the Cervix—
COLIN G. THOMAS, M.D., Monticello, 2:00
21. Diagnosis of Carcinoma of the Stomach—
HARRY R. JENKINSON, M.D., Iowa City, 2:15
22. Diagnosis of Carcinoma of the Lip—
NELSON M. WHITEHILL, M.D., Boone, 2:30
23. The Rational Management of Tumors of the Breast—
THOMAS J. IRISH, M.D., Forest City, 2:45
24. Diagnosis of Carcinoma of the Rectum—
CARL G. BRETHAUER, M.D., Holstein, 3:00
25. Address—Cancer of the Larynx—
Guest Eye, Ear, Nose and Throat Section—
WILLIAM V. MULLIN, M.D., Cleveland, 3:15
Discussion by WILLIAM JEFSON, M.D., Sioux City, 3:45
Summary by Surgical Guest—
DEAN D. LEWIS, M.D., Baltimore, 4:15

Thursday Evening, May 5**ANNUAL BANQUET**

Hotel Martin

6:30

Toastmaster—

PRINCE E. SAWYER, M.D., Sioux City
First Vice President, Iowa State Medical Society

President's Address—

CHANNING G. SMITH, M.D., Granger

Address by the President-Elect—

BERT L. EIKER, M.D., Leon

Music and Entertainment

Friday, May 6

8:30 a. m.

26. The Medical Section of the Iowa Conference on Child Health and Protection—
FRED MOORE, M.D., Des Moines, 8:30
27. Physical Diagnosis in Children—
ROBERT H. MCBRIDE, M.D., Sioux City, 8:45
28. Diagnosis of Childhood Tuberculosis—
C. A. STEWART, M.D., Clinical Professor of Pediatrics, University of Minnesota, Minneapolis 9:05

29. Control of Diphtheria and Smallpox in Iowa—

MARTIN D. OTT, M.D., Davenport, 9:25
Discussion by HOWARD A. LANPHERE, M.D., Des Moines

30. Cerebral Hemorrhage of Newborn—

E. D. PLASS, M.D., Iowa City, 9:50
PHILIP C. JEANS, M.D., Iowa City

31. Nutrition and Dental Caries—

JULIAN D. BOYD, M.D., Iowa City, 10:15

32. Child Health and Protection: The Physician's Responsibility—

A. J. CARLSON, Professor of Physiology, University of Chicago, Chicago, 10:35

Report of House of Delegates
Installation of President**OPHTHALMOLOGY, OTOLARYNGOLOGY AND RHINOLARYNGOLOGY****Wednesday, May 4**

10:00 a. m.

St. Joseph's Hospital

School of Instruction, Dry Clinics and Demonstrations—

1. Research in Otolaryngology at University of Iowa—
DEAN M. LIERLE, M.D., Iowa City
2. Address—Treatment of Malignancies of the Nose and Throat—
WILLIAM V. MULLIN, M.D., Cleveland
3. Clinics—Eye Surgery—
CECIL S. O'BRIEN, M.D., Iowa City
4. Dry Clinics—Demonstration of Cases—
WILLIAM W. PEARSON, M.D., Des Moines

1:00 p. m.

Luncheon

Guests of J. B. Naftzger, M.D., Sioux City,
Chairman of Eye, Ear, Nose and Throat Section

2:30 p. m.

Visit to the School for the Deaf

Presentation of Students—

James E. Reeder, M.D., Sioux City

Thursday, May 5

9:30 a. m.

Room 3—Masonic Temple

1. Observations on Post-Tonsillectomy Patients—
MARTIN J. JOYNT, M.D., LeMars
Discussion by FRED W. BAILEY, M.D., Cedar Rapids
DANIEL F. HUSTON, M.D., Burlington
2. Visual Field Changes: A Three Dimensional Model for Demonstration—
ABBOTT M. DEAN, M.D., Council Bluffs
Discussion by C. W. RUTHERFORD, M.D., Iowa City
L. A. TAYLOR, M.D., Ottumwa
3. Abscess of the Pterygomaxillary Fossa—with a report of a case—
CECIL C. GRANT, M.D., Cedar Falls
Discussion by C. M. WERTS, M.D., Des Moines
ROBERT E. ROBINSON, M.D., Waverly
4. The Use of Foreign Protein as an Aid in Ocular Infections—
EDWIN C. COBB, M.D., Marshalltown
Discussion by HARVEY GRATIOT, M.D., Dubuque
ELMER P. WEIH, M.D., Clinton

1:00 p. m.

Luncheon

Guests of Sioux City Eye and Ear Academy

5. Infective Thrombosis Following Mastoidectomy—

RALPH H. PARKER, M.D., Des Moines
Discussion by SUMNER B. CHASE, M.D., Fort Dodge
STEPHEN A. O'BRIEN, M.D., Mason City

Our Guests



C. A. Stewart, M.D.
Minneapolis, Minnesota



Dean D. Lewis, M.D.
Baltimore, Maryland



A. J. Carlson
Chicago,
Illinois



Henry L. Ulrich, M.D.
Minneapolis, Minnesota



William V. Mullin, M.D.
Cleveland, Ohio

6. Occlusion in Refraction—

C. E. CHENOWETH, M.D., Mason City
 Discussion by GORDON F. HARKNESS, M.D., Davenport
 WAYLAND H. MALOY, M.D., Shenandoah

7. The Surgical Treatment of the Acute Frontal Sinus that is Infected for the First Time—

HOWARD E. THOMPSON, M.D., Dubuque
 Discussion by ALBERT J. JOYNT, M.D., Waterloo
 WILLIAM F. BOILER, M.D., Iowa City

8. Laryngeal Dyspnea—

RALPH E. RUSSELL, M.D., Waterloo
 Discussion by THOMAS R. GITTINS, M.D., Sioux City
 CHARLES L. CHAMBERS, M.D., Des Moines

ENTERTAINMENT

Wednesday, May 4

7:30 p. m.

Smoker and Entertainment, Masonic Temple

8:00 p. m.

Auxiliary Card Party, Hotel Martin
 All visiting ladies invited

Thursday, May 5

1:00 p. m.

Auxiliary Luncheon, Country Club
 All visiting ladies invited

6:30 p. m.

Annual Banquet, Hotel Martin
 Physicians, their wives and guests

LOCAL COMMITTEES

CENTRAL COMMITTEE:

P. E. Sawyer, Chairman	J. B. Naftzger
E. C. Cobb	R. H. McBride
William Jepson	C. R. Watkin

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E. C. Cobb	

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H. Brown	Roscoe Jepson

WOMEN'S DIVISION:

Emma M. Ackerman, Chairman

CONTACT WITH AUXILIARY:

C. R. Watkin

HOUSE OF DELEGATES

Room 2—Masonic Temple

Tuesday, May 3

1:30 p. m.

Roll Call

Approval of Minutes of Friday Morning Session, 1931

Report of Secretary

Report of Treasurer

Report of Council

Report of Council Committees

Speakers Bureau Committee—

DANIEL J. GLOMSET, Des Moines, Chairman

Nurses Training Committee—

IRA N. CROW, Fairfield, Chairman

Public Relations Committee

WILLIAM W. PEARSON, Des Moines, Chairman

Committee on Newspaper Publicity—

C. A. BOICE, Washington, Chairman

Committee on Cancer Literature—

WILLIAM JEPSON, Sioux City, Chairman

Committee on Necrology—

L. R. WOODWARD, Mason City, Chairman

Report of Trustees

Report of Delegates to A. M. A.

Report of Standing Committees of the House of Delegates:

Medico-Legal—

FRANK A. ELY, Des Moines, Chairman

Scientific Work—

CHANNING G. SMITH, Granger, Chairman

Public Policy and Legislation—

THOMAS A. BURCHAM, Des Moines, Chairman

Constitution and By-Laws—

CHARLES B. TAYLOR, Ottumwa, Chairman

Publication Committee—

RALPH R. SIMMONS, Des Moines, Editor

Finance—

ERNEST C. MCCLURE, Bussey, Chairman

Arrangements—

CHANNING G. SMITH, Granger, Chairman

Report of Special Committees of the House of Delegates:

Historical—

WALTER L. BIERRING, Des Moines, Chairman

Medical Economics—

JOHN I. MARKER, Davenport, Chairman

Medical Library—

FELIX A. HENNESSY, Calmar, Chairman

Military Affairs—

AARON C. CONWAY, Marshalltown, Chairman

Superannuated Physicians—

WILLIAM L. HEARST, Cedar Falls, Chairman

Women's Auxiliary Advisory Committee—

C. A. BOICE, Washington, Chairman

Committee on Child Health and Protection—

FRED MOORE, Des Moines, Chairman

State Pharmaceutical Association Joint Committee—

ROBERT L. PARKER, Des Moines, Chairman

Memorials and Communications

New Business

Election of Committee on Nominations

Friday, May 6

8:00 a. m.

Roll Call

Reading of Minutes

Report of Committee on Nominations

Election of Officers

Report of Committees

Unfinished Business

New Business

Adjournment

HEADQUARTERS



MASONIC TEMPLE

MEETING PLACES

Headquarters—Masonic Temple
 General Meetings—Auditorium, Masonic Temple
 House of Delegates—Room 3, Masonic Temple
 Eye, Ear, Nose and Throat Section—Room 2, Masonic Temple
 Registration and Commercial Exhibits—Masonic Temple Lobby
 Scientific Exhibits—Masonic Temple
 Headquarters for Ladies—Hotel Martin

SPECIAL MEETINGS

12:00-1:20

Alumni Association S. U. I. College of Medicine

The Alumni Association of the College of Medicine will meet at luncheon Thursday, May 5, at 12:00 o'clock. Place to be announced.

Section Chairmen and Reporters

Section on Medicine—
 Chairman, DANIEL J. GLOMSET, M.D., Des Moines
 Section on Surgery—
 Chairman, H. L. BEYE, M.D., Iowa City
 Section on Ophthalmology, Otology and Rhinology—
 Chairman, J. B. NAFTZGER, M.D., Sioux City
 Reporter, General Session—
 MASTER REPORTING COMPANY, Chicago
 Reporter, House of Delegates—
 DOROTHY C. MCCARTHY, Des Moines

OUR GUESTS

A. J. CARLSON, Chicago, Illinois
 HAL DOWNEY, Minneapolis, Minnesota
 DEAN D. LEWIS, M.D., Baltimore, Maryland
 WILLIAM V. MULLIN, M.D., Cleveland, Ohio
 C. A. STEWART, M.D., Minneapolis, Minnesota
 HENRY L. ULRICH, M.D., Minneapolis, Minnesota

Rules for Papers and Discussions

"No address or paper before the Society, except those of the President and the Guests, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes nor more than once on any subject." "All papers read before the Society shall be the property of the Society." (Excerpts from By-laws.)

Each paper should be typewritten, and deposited with the Secretary when read; if this is not done, it will not be published.

On rising to discuss a paper, the speaker will please come forward and announce his name and address plainly.

Registration

Do not fail to Register.

Please bring your membership card for presentation at Registration Desk.

IOWA STATE MEDICAL SOCIETY OFFICERS AND COMMITTEES 1931-1932

President.....Channing G. Smith, Granger
 President-Elect.....Bert L. Elker, Leon
 First Vice President.....Prince E. Sawyer, Sioux City
 Second Vice President.....J. Fred Clarke, Fairfield
 Secretary.....Robert L. Parker, Des Moines
 Treasurer.....E. B. Winnett, Des Moines

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Term expires

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 Second District—Lee R. Woodward, Mason City (Chairman).....1933
 Third District—Frank P. Winkler, Sibley.....1934
 Fourth District—William Jepson, Sioux City.....1935
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 Eleventh District—A. V. Hennessy, Council Bluffs.....1932

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DELEGATES TO A. M. A.

*Donald Macrae, Council Bluffs.....1932
 William Jepson, Sioux City.....1932
 Fred Moore, Des Moines.....1933

ALTERNATE DELEGATES TO A. M. A.

Thomas A. Burcham, Des Moines.....1932
 John F. Herrick, Ottumwa.....1932
 N. G. Alcock, Iowa City.....1933

EDITOR OF THE JOURNAL

Ralph R. Simmons.....Des Moines

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 Earl B. Bush.....Ames

* Deceased.

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 1122 Bankers Trust Bldg., Des Moines

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 President Elect.....Mrs. P. B. McLaughlin, Sioux City
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President.....Mrs. B. A. Bowers, Sioux City
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Woman's Auxiliary Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

Third Annual Meeting
Registration Headquarters
Hotel Martin

8:00 p. m.
Card Party
Hotel Martin

PROGRAM

Wednesday, May 4
12:30 p. m.

Luncheon and Pre-Convention Meeting
(For Board Members)

Thursday, May 5
10:00 a. m.

Business Meeting, Woman's Auxiliary
Presentation of Advisory Board—
Talk by C. A. BOICE, M.D., Chairman
Greetings—
CHANNING G. SMITH, President, Iowa State Medical Society
Election of Officers
Installation of Officers
Post-Convention Meeting held upon adjournment of
this meeting.

2:30 p. m.
General Meeting
Hotel Martin

President Mrs. Channing G. Smith, presiding

Invocation—

REVEREND PERCY L. BURT, Sioux City.

Music—

Greetings of Welcome—

MRS. B. A. BOWERS, President, Woodbury County Auxiliary.

Response—

MRS. CLYDE A. BOICE, Washington

Business Meeting.

Address: Legislative Activities

THOMAS A. BURCHAM, M.D., Des Moines

Address: The Auxiliary—

MRS. JAMES E. BLAKE, First Vice President.
Woman's Auxiliary to the American Medical Association.

1:00 p. m.
Luncheon, Country Club
Reading Music

6:30 p. m.
Banquet, Hotel Martin
Physicians, wives and guests

This program, social and business, is for all
visiting women. All eligible women are urged to
become members.

State Society of Iowa Medical Women

Thirty-fifth Annual Meeting, Sioux City

Wednesday, May 4, 1932
Headquarters—Hotel Martin
Meeting Place—Hotel Martin

Dinner
6:30 p. m.

Evening Program
7:30 p. m.

Welcome—

MRS. M. P. SUMMERS, President,
Iowa Congress Parents and Teachers

Appointment of Committees

President's Address

The Strategic Position in the Treatment of Syphilis—
MARY H. SWAN, M.D., Chicago, Illinois

Albuminuria-anuria of Extrarenal Origin with case
report—

MARY L. TINLEY, M.D., Council Bluffs

Annual Business Meeting and Election of Officers.

OFFICERS

President.....Grace M. Sawyer, M.D., Woodward
Vice President....Zella White Stewart, M.D., Iowa City
Secretary.....Nelle S. Noble, M.D., Des Moines
Treasurer..Jeannette Dean Throckmorton, Des Moines

CHAIRMAN OF COMMITTEES

Credentials.....C. Erickson Hill, M.D., Council Bluffs
Ethics.....Helen Johnston, M.D., Des Moines
Publications.....
—Jeannette Dean Throckmorton, M.D., Des Moines
Arrangements.....Emma Ackerman, M.D., Sioux City
Resolutions.....Eppie McCrea, M.D., Eddyville

Sioux City Host to Eighty-first Annual Session



Aerial view of downtown business section of Sioux City

Sioux City, the meeting place chosen for the Eighty-first Annual Session of the Iowa State Medical Society, will no doubt seem somewhat changed to those who attended the last meeting held there in May, 1914. The above picture represents the thriving convention city of 1932, whose population has increased by over one-third since 1914.

Situated as it is, on the Missouri River, Sioux City is the gateway to three states; and in addition to entertaining the members of our own medical society at this annual session, invitations are being issued to members of the profession in the eastern sections of our neighboring states—Nebraska and South Dakota. This meeting, therefore, not only offers an unusually fine program but also affords an opportunity to meet old friends in the state and physicians from our neighboring states.

In spite of the fact that Sioux City is located at one extreme of the state, it is readily accessible to all who wish to attend the annual session. It is the tenth largest railroad center of the United States—affording over twenty lines of approach to Sioux City by rail, while the recent paving program has given Sioux City a key position to the state-wide connected system of paved highways. Federal highways number 77, 75 and 20, and state highways number 12, 29 and 141 lead directly to Sioux City. There are several bus lines—the Crandic Stages, the Pickwick-Greyhound Line, and the Interstate Bus Lines—operating 24 busses in and out of the city daily. The United Air Lines have planes arriving in Sioux City daily and the Northwest Airways, weekly.

The hotel accommodations are ample, pleasant and located convenient distances from the convention headquarters. Three of the best hotels are under the same management, thus making it possible to harmonize all arrangements. It is advisable to write for reservations in advance, when possible, since this will permit the various hotel managements to provide accommodations more exactly fitting to individual

requirements. The following list of hotels are all strictly modern and fully equipped for your comfort:

The Warrior, Sixth and Nebraska Streets, 250 rooms, each with bath. Single, \$3.00 up; double, \$5.00 up.

The Martin, Fourth and Pierce Streets, 250 rooms. Single, with bath, \$3.00 up; double, with bath, \$5.00 up.

The West, Third and Nebraska Streets, 250 rooms. Single, with bath, \$2.50 up; double, with bath, \$4.00 up.

The Jackson, Fifth and Jackson Streets, 100 rooms. Single, with bath, \$2.50 up; double, with bath, \$4.00 up.

The Howard, Third and Nebraska Streets, 210 rooms. Single, with bath, \$2.50 up; double, with bath, \$3.00 up.

The Chicago House, Fourth and Jones Streets, 60 rooms. Single, with bath \$2.50; double with bath, \$3.00.

Headquarters for all scientific meetings and for the smoker will be in the Masonic Temple, which is located at Ninth and Nebraska Streets. Sectional meetings, committee meetings and the House of Delegates will be cared for here as well. A registration desk, information bureau and commercial exhibits will be in the lobby of the Masonic Temple. A special feature this year is to be the scientific exhibits on the subjects discussed on the program, which will be assembled in one of the rooms in the Masonic Temple. The annual banquet, on Thursday evening, will be held at the Hotel Martin. The Hotel Martin will also be the headquarters for the meetings of the Woman's Auxiliary and the State Society of Iowa Medical Women.



Hotel Martin, Sioux City

The Woodbury County Medical Society and the Sioux City Chamber of Commerce are cooperating in every way to make this meeting a great success. Three committees have been appointed to have charge of the plans for the social entertainment of the visiting physicians and their wives. Members of the Iowa State Medical Society are urged to combine an educational and a real pleasure trip by attending the Eighty-first Annual Session at Sioux City, May 4, 5 and 6.

CHRONIC SUPPURATION OF THE
MIDDLE EAR *

WAYNE J. FOSTER, M.D., Cedar Rapids

I have chosen to make some remarks about chronic middle ear infections, not because they are new or because they are rare, but because they always have been and will continue to be one of our foremost problems. I go about it with no idea of adding anything new, to either the diagnosis or treatment, but if my remarks may stimulate some new interest in this group of cases I will feel that this paper has accomplished its purpose. Fortunately, we do not have to contend with as many chronic ear infections today as in the years gone by, due to the more intelligent management of the acute ear infections. However, we still have a fair number of patients with chronically discharging ears coming to us for advice and treatment, and I believe no condition requires more careful study if we are to advise those patients intelligently in the course they are to follow.

With the marked change in our attitude toward the management of the chronic discharging ear, we sometimes find ourselves at a loss to know just what stand to take in regard to treatment. Statistics show that 50 to 90 per cent of the brain abscesses have as their source of infection a chronic discharging ear. Life insurance companies give an added mortality rate of 75 to 150 (to 100,000) to the risk with a chronic discharging ear with a foul odor. We know that the patient with a tympanic mucosal type of middle ear infection is practically free from the danger of a severe complication. Also, we know that many patients with a chronic discharging ear with a foul odor and with extensive bone changes in the middle ear and mastoid, go through life with no ill effects other than the interference with the hearing and the annoying discharge. The fact that only a small percentage of patients with chronic otorrhea develop a severe complication, such as brain abscess, labyrinthitis and lateral sinus phlebitis, should make us more alert to recognize and treat the cases that carry that hazard. Radical surgical procedures in a few selected cases still hold a highly important place in the treatment of chronic discharging ears.

In going over the literature, it was interesting to note the number of articles dealing with methods and end results in the conservative management of these cases. There is almost an equal number of papers summarizing the results obtained in

various types of surgical procedures. I was impressed with the scarcity of papers dealing with the subject of chronic middle ear infections from the clinical standpoint. It seems to me that little has been written with the idea of pointing out in detail the type of an ear infection that should be handled in a conservative way and the one that calls for operation.

Shambaugh¹ states that the greatest problem confronting the otologist in treating patients with chronic discharging ears is that of differentiating between the cases in which there exists the menace of a serious complication and those in which this danger is negligible.

With a fair degree of accuracy, chronic discharging ears may be classed as the non-dangerous and dangerous types. There are a number of things that will give us valuable information leading to this diagnosis. A careful history is of great help. An ear infection that has its onset during or immediately following measles or scarlet fever should always make us suspicious that we are dealing with a dangerous type, although the majority of them are not. The age of the patient when the first middle ear infection is experienced should be obtained if possible. Almour² states that the development of a chronic suppurative otitis media is in a large measure dependent upon whether or not a disturbed pneumatization has resulted from an infantile otitis. A history of pain about a discharging ear, either over the mastoid or about the side of the head, may give us a clue as to the process that is going on in the ear and mastoid. A history of acute exacerbations, associated with an increase in the amount of discharge and pain about the ear, is usually found in the serious type of disease. Very careful inquiry should be made about the hearing—whether it is remaining the same, or decreasing gradually, and whether it is much better at times than others. This is often a determining factor in the choice of treatment. A careful history of the general condition of the patient should be obtained.

Upon examination, the discharge should be studied carefully. The amount of discharge is not of great importance; in the mild type of case it may be profuse, while in some cases where the whole mastoid process is filled with a cholesteatoma, it may be very slight. In the latter type of case the discharge is exceedingly foul. The stringy mucous or mucopurulent, odorless discharge is usually found in the non-dangerous type of middle ear disease—the so-called tympanic mucosal type. The examiner should not come to any conclusion as to the character of the discharge until the canal has been cleaned repeatedly and

*Presented before the Section on Ophthalmology, Otology and Rhinology, Eightieth Annual Session, Iowa State Medical Society, Des Moines, May 13, 14, 15, 1931.

secondary infections eradicated. The persistent foul discharge with flaky white particles in the washings, after vigorous local treatment has been instituted for some time, is strongly indicative of bone necrosis and the probable presence of a cholesteatoma. The presence of polypi gives the same indication unless it can be demonstrated that they spring from the margin of a perforation. The contour of the canal should be studied carefully. A cholesteatoma may cause almost a complete collapse of the canal.

The type of perforation present is of the greatest importance. The size means little or nothing. A perforation in which there is drum membrane on all sides is the type usually found in the non-dangerous type of middle ear disease—the so-called central perforation. The marginal perforations, particularly about Shrapnell's membrane and those in the posterosuperior quadrant, are the kind encountered in the dangerous type of middle ear suppuration. Kerrison³ states that according to his experience, marginal perforations always mean osseous necrosis. It is through the marginal perforation that the squamous epithelium of the external canal gains entrance to the middle ear and replaces the diseased mucous membrane lining this cavity. It is the generally accepted idea that as this new epithelium invades the middle ear in the presence of infection, desquamation and exfoliation take place, piling up masses of this material which are known as cholesteatoma. It is the pressure from these masses that leads to the secondary bony changes. The ingrowth of epithelium is no doubt nature's effort to heal the lesion, but lack of ventilation and drainage usually defeat its purpose. However, we have all seen cases in which an old middle ear lesion was completely healed by this process, leaving a smooth, white, dry cavity. A disturbed pneumatization, resulting in a filling in of the aditus and antrum, aids in this healing process.

A cholesteatoma is the most serious pathologic process that may develop in the temporal bone in connection with chronic middle ear suppuration. The cholesteatoma may be limited to the middle ear and attic, or it may invade the antrum and mastoid, pushing everything ahead of it, and fill the entire mastoid cavity. It may expose the facial nerve, invade the labyrinth, or expose the dura and sinus, thus creating the avenue for infection for a serious complication.

X-rays should always be taken, but I do not feel that pictures are of great value in forming an opinion as to the type of ear disease with which we are dealing. Sometimes the hard layer of bone surrounding a large cholesteatoma may

be shown by x-rays. X-ray pictures will help us in determining whether we are dealing with a small, sclerotic, infantile type of mastoid, in which the invasion by a cholesteatoma is almost impossible, or whether we are dealing with the larger mastoid that may aid in the development of this pathologic process. It is a noteworthy fact that a cholesteatoma not infrequently fills up the cavity produced by the simple mastoidectomy.

Shambaugh¹ brings out some points about the significance of cholesteatoma and caries in the middle ear which should be noted. He states that the detection of an area of caries in the tympanum, either at the margin of a perforation or over the promontory, cannot be taken as an indication that the bone-invading disease is of sufficient menace to justify a radical operation. In the same way, the much more serious menace produced by the presence of a cholesteatoma does not necessarily justify radical surgical measures. It is only when the conclusion is reached that the necrosis extends beyond the confines of the tympanum to the attic, aditus or antrum that the menace of possible complication exists. Since we are dealing with a disease that presents a great variety of forms and a clinical picture that varies so in its degree of seriousness, it is apparent that there are no set rules for treatment. In some cases the amount of discharge may be slight and the disturbance of hearing so little that the patient gives it little thought, and he really has a mild condition; while, in others, there may be almost total loss of hearing, profuse foul discharge, pain, and this patient is truly suffering from a serious disease.

In the tympanic mucosal type of disease, the treatment is always conservative. Foci of infection in the nose and throat should be eradicated. In a paper of this length it is impossible to go into the various forms of local treatment to the ear. Many kinds of antiseptic drops are used. Sulzberger's iodine powder is no doubt a very valuable addition to our local therapeutic measures. The technic and end results described by Lederman⁴ in the use of iodine powder are of great value.

In dealing with the chronic discharging ear with a marginal perforation, a foul discharge and a cholesteatoma, it is very difficult to say just how far conservative measures should be employed and when one should think of operation. Even in the dangerous type of middle ear disease, the treatment is often conservative in the beginning. The reasons are obvious. It gives the physician a chance to study the case more carefully and also to observe the results of conservative measures. It may be possible to obtain great improvement

by the removal of a polyp or by enlarging the perforation over Shrapnell's membrane and by gently curetting out a cholesteatoma limited to this area. Removal of the ossicles may give improvement by providing better ventilation and drainage. Since any treatment of the chronic discharging ear has two things in view, the preservation of the hearing and the eradication of a bone-invading focus of infection, the preservation of hearing may change our whole line of treatment. If the patient is dependent upon the discharging ear for his hearing, which is not infrequently the case, any surgical procedures directed at the middle ear should be attempted with a great deal of caution. If a patient with a chronic discharging ear shows any evidence of a beginning of intra-cranial complication, or an involvement of the facial nerve, there is only one treatment and that is surgical. A marked sagging of the posterior canal wall in the presence of a foul discharge that has gone on for years, will assure us at the outset that any local measures will fail. Once the conclusion is reached that a chronic discharging ear requires surgical treatment, either to conserve the hearing or to remove a dangerous source of infection, the choice of operative procedure is usually based upon the pathology found. The results of the "complete mastoidectomy," as given by Dr. George Albright,⁵ have been of great help in determining our operative procedure in the chronic discharging ear where it is necessary to conserve the hearing.

In conclusion, may I say that I do not wish you to get the impression that this is a plea for more radical treatment of the chronic discharging ear. There is, however, the occasional case that requires operation, and I trust that the emphasizing of some of these old, well-known points may be of value.

I wish to present the three following cases briefly:

Case 1. The patient was a white male, age twenty-seven. He was first seen May 20, 1929, with the following history:

At the age of three or four he had had measles and his right ear had been discharging continuously ever since. As long as the patient could remember the discharge had always been foul. At times it was more profuse than at others. He stated that the hearing was fair with this ear and very good with the left. The thing that brought him in for examination was the very foul odor of the discharge and a pain in the top of his head which he described as severe and which bothered him most at night. This pain had been present for six months prior to his first examination. He stated that at times he was dizzy, although he was unable to give an accu-

rate description of this symptom and never complained of falling either to the right or left.

Upon examination, a small amount of very foul discharge was found in the canal. The drum was intact except for a large perforation in the postero-superior quadrant of the drum. Granulations were growing out of the perforation. His hearing was: whispered voice, five feet; spoken voice, twenty-five feet.

X-rays of the mastoid showed increased density, with complete obliteration of the cells of the right mastoid. The left mastoid was normal, of the large pneumatic type. Caloric reactions were normal. X-rays of the sinuses gave no evidence of infection. His tonsils had been cleanly removed.

The granulations were cleaned out of the perforation and the patient was given alcohol drops, with instructions to use them three times a day and to report twice a week for treatment. He was kept under observation until September 1, with no improvement whatsoever. He persistently complained of pain, which he said was becoming worse.

On account of the persistent foul discharge and the severe pain, an operation was advised, and September 10, 1929, a radical mastoid operation was done. The cortex was very thick and hard. On going down to the antrum, a cholesteatoma was encountered. This was removed and the antrum entered. It was found that the dura was exposed over an area the size of a dime just above and posterior to the antrum. It was very markedly thickened. The posterior canal was cut down and the radical operation completed. On account of marked necrosis in the attic, and the fact that the dura was exposed, it was thought advisable to complete the radical operation.

This patient went on to an uneventful recovery; was a gradual return of function. She has been examined at regular intervals. Her facial paralysis never has entirely disappeared, although she moves her face better now than prior to her operation, and the cavity has remained dry.

Case 2. The patient was a white woman, age forty-two. She was first seen April 10, 1929, with the following history:

About twenty years before she had a severe nose and throat infection, followed by a discharging left ear, for which a simple mastoidectomy was done. The left ear had discharged only at intervals since that time, but the discharge had always been very offensive. She came in for examination because of the pain over her mastoid and increase in the amount of discharge, and because of the fact that she had experienced difficulty in moving the left side of her face. She stated that her friends had told her that her face had not looked normal for the past six months, and that there was increasing difficulty in closing her left eye.

Upon examination, there was a small amount of very offensive discharge in the canal. The canal was almost collapsed by the marked sagging of the posterosuperior canal wall. This swelling was soft and could be dented, giving one the idea that it was

the consistency of putty. X-ray examination showed increased density of the left mastoid with obliteration of the cells, except for two small areas in the lower portion. She had practically no hearing in this ear. On account of the partial facial paralysis, she was advised to have an operation.

On May 1, 1929, a radical mastoid operation was done on the left side. Upon removing a very thin cortex, which was partially broken down, a very large cholesteatoma was encountered, occupying a large mastoid cavity. This was carefully removed, leaving a smooth, hard layer of bone. As the last bit of the cholesteatoma was removed about the antrum, the seventh nerve was found exposed in the floor of the aditus just where it turns down. I do not believe the nerve was injured in removing the mass. The entire posterior canal wall was gone. Granulations in the middle ear were cleaned out, a plastic flap cut and the cavity packed very lightly.

Upon examination, there was a rather large amount of very foul discharge in each canal. There was no evidence of drum-head or ossicles on either side. There was considerable sagging of each posterior canal wall. X-ray showed a marked blurring of each mastoid. The hearing was very poor, the ordinary spoken voice being heard at a distance of three to four feet, with each ear.

Since this patient had been under long periods of local treatment, without improvement, she was told that surgery was probably the only thing that would relieve her of the discharge and foul odor. The patient did not wish to have the operation at that time and was seen only occasionally until December 30, 1930, when she returned, asking to have the operation performed on account of the unbearable odor produced by the discharging ears. The right ear was opened, and it was found that nature had almost completed a radical mastoid operation. The cortex was gone over most of the mastoid, and a cholesteatoma was encountered just under the periosteum. The posterior bony canal was gone and the cholesteatoma was removed, leaving a large, smooth cavity. There was little to do in the middle ear, as nature had almost completed its cure. It was interesting to note how rapidly healing took place.

Upon examining the left ear, it was found that the posterior canal wall, both bony and cartilaginous, was so markedly broken down that it was possible to remove a large cholesteatoma through the external auditory canal, by very gently using a blunt curette, and by irrigations.

This patient was only recently examined and both ears are dry. The patient feels that her hearing has improved considerably since the operation.

This case is presented merely to show how far nature may go in doing a radical mastoidectomy.

Case 3. The patient was a white woman, age forty-five. She was first seen July 25, 1921, with the following history:

At the age of four years she had had scarlet fever. Both ears began to discharge during this disease and had continued to discharge ever since. A mastoidectomy was done on the right ear at that time

but it did not stop the discharge. She described the discharge as always being very offensive, and that was really the thing that brought her in for examination.

For three days no change was noticed in the facial paralysis. On the fourth day the patient seemed to have almost a complete facial paralysis. This persisted for about twelve weeks, when there his ear is dry, his hearing is practically gone, but he has been perfectly comfortable.

REFERENCES

1. Shambaugh, George E.: Chronic suppurative otitis media. Arch. Otolaryngol., December, 1930.
2. Almour, Ralph: The significance of the squamous epithelium in the cause and repair of chronic middle-ear disease. Precession Vol. of the American Academy of Ophthalmology and Otolaryngology, 1930.
3. Kerrison, Phillip: Diseases of the ear. Second edition, 1921.
4. Lederman, M. D.: Non-surgical dry treatment of chronic suppurative otitis with iodine powder, Laryngoscope, June, 1930.
5. Albright, George C.: Chronic mastoiditis, Jour. Iowa State Med. Soc., xxi, 156, 1931.

CONCEALED GASTRO-INTESTINAL HEMORRHAGE*

JOHN M. BERKMAN, M.D., Rochester

Gastro-intestinal hemorrhage is considered to be concealed after one or repeated attacks of symptomless gastro-intestinal hemorrhage evidenced by melena, without a suggestive clinical history. Although some of the patients with this condition who are seen in The Mayo Clinic are still bleeding at the time of examination, a great majority of them come at varying times after the bleeding has ceased, but evidence of various degrees of secondary anemia still may be present. There is nothing to suggest the site of the lesion.

It is therefore necessary to carry out rather extensive laboratory search. This includes roentgenologic examination of the esophagus, stomach, small intestine and colon, tests of hepatic function and various investigations of the blood, the last being necessary to rule out the possibility of a blood dyscrasia. Investigation of the gall-bladder in a search for the bleeding lesion probably is not essential. It has been suggested that bleeding of this type may come from the gall-bladder, but positive evidence to substantiate this has been lacking, and the consensus of opinion is very strongly against this possibility.

Occasionally a patient will give a history of having passed black stools that are not due to bleeding. Ingestion of bismuth, iron, charcoal, or licorice powders will cause stools to be black. Beets, large amounts of other vegetables, such as spinach and tomatoes, and fruits, such as huckleberries and blueberries, will cause the stools to be very dark.

*Read before the Marshall County Medical Society, Marshalltown, November 3, 1931.

If laboratory investigation discloses silent duodenal or gastric ulcer, bleeding polypi, carcinoma of the colon, or occasionally a lesion of the small intestine, the cause of the melena probably has been found. However, there are still the possibilities of cirrhosis of the liver or blood dyscrasia which must be ruled out before a diagnosis of concealed hemorrhage can be made.

Usually, clinical and laboratory examinations are sufficiently definite to rule out cirrhosis of the liver and blood dyscrasia. In a few cases esophageal varices have been detected roentgenologically. However, even in cases in which esophageal varices have been known to be large, they have not been identified by roentgenologic methods, and usually such methods offer little help in diagnosis of this condition. In cases of hepatic cirrhosis, if the associated varices bleed enough to cause tarry stools, there should be very definite clinical evidence of the condition in the liver. There has been only one case in the clinic in which esophageal varices were seen by means of the esophagoscope, and in this case a diagnosis of cirrhosis of the liver already had been made. In other words, esophageal varices appear to occur only in well-established clinical cases of such conditions as hepatic cirrhosis and Banti's disease.

Probably in the largest number of cases, unexplained gastro-intestinal hemorrhage is from duodenal ulcers or areas of duodenitis. Carcinomas of the stomach very rarely remain undiagnosed after roentgenoscopy. However, this is not true of lesions of the duodenum. For example, in 1930, 13,858 roentgenoscopic examinations of the stomach and duodenum were made at the clinic with a diagnosis of duodenal ulcer in 1,684 cases. In 527 cases, or 31.3 per cent, operation was performed, and in nineteen of these 527 cases duodenal ulcer was not demonstrated surgically. Of the remainder of the patients who were operated upon, twenty who were not given a diagnosis of duodenal ulcer after roentgenoscopy, were found to have duodenal ulcer at exploration. These twenty patients did not all have hemorrhage, but I have cited the whole group in order to point out that in an appreciable number of cases of duodenal ulcer the roentgenoscopic findings are not in evidence. Occasionally, after thorough search during exploratory operation for gastro-intestinal hemorrhage, the bleeding lesion has not been found. However, on opening the stomach and examining the mucosa of the stomach and duodenum, a small ulcer or area of bleeding duodenitis has been demonstrated. Accordingly, it would not seem advisable to terminate the exploratory oper-

ation until the mucosa of the stomach and duodenum had been closely examined.

With the exception of cases of obstruction, successive roentgenograms taken at intervals after ingestion of an opaque substance have not been of great assistance in the diagnosis of lesions of the jejunum or ileum. Such roentgenograms are made at the clinic after the usual roentgenoscopic examination of the stomach and duodenum. Following this, roentgenograms are taken every half hour for three hours. At the end of the three hours, provided there is no obstruction, the barium will have reached the cecum. In this way, obstruction of the small intestine was diagnosed many times in 1930, but in only two instances were other lesions, not accompanied by obstruction, diagnosed; one of these was a case of tuberculous enteritis, and another, a case of chronic ulcerative colitis in which the condition had extended into the ileum.

In 1930 successive roentgenograms were made of the small bowel of 365 patients. Of these, 318 patients were not operated on, but the remaining forty-seven subsequently came to operation. Among the forty-seven the following lesions of the small bowel were found at operation: 1. There was a fibrosarcoma of Meckel's diverticulum with attachment to the urinary bladder. In this instance melena had been rather marked for a considerable time. The only subjective symptom that was suggestive was that slight discomfort had been felt in the lower part of the abdomen, but this discomfort had been present only when the patient was in a sitting position. 2. An inoperable growth was found at the ileocecal valve. 3. A pedunculated lipoma of the jejunum was disclosed. 4. A bleeding ulcer of the ileum was seen near the base of a Meckel's diverticulum. 5. A carcinoma of the jejunum, without obstruction, was revealed.

In the course of the usual roentgenologic examination of the stomach, part of which consists of observing the flow of barium into the jejunum, several lesions recently have been detected. A few of them are as follows: (1) an ulcerative carcinoma of the fourth portion of the duodenum; (2) a sarcoma of the jejunum, and (3) in two instances, carcinoma of the pancreas which had ulcerated into the duodenum.

In this search for causes of melena, the colon must be included. Roentgenoscopic and roentgenologic examinations of the colon are very satisfactory, and there are few lesions of the colon that are not seen. This is especially true since the advent of injection of air. In this procedure, the usual barium enema is given, but before the roentgenogram is made, the barium is evacuated and air is injected. Since this method has been used,

many cases of polyposis have been found, which previously would have been missed.

After the above mentioned examinations have been completed, and negative results have been obtained, a diagnosis of concealed gastro-intestinal hemorrhage is justified. This means that one is no farther ahead than at the start except for the satisfaction of knowing that everything possible has been done to determine the source of the bleeding. There is only one question left to be decided, and that is whether or not the patient should undergo surgical exploration. There is nothing in past experience to aid in making this decision in any individual case.

There are arguments both in favor of and against surgical exploration. The most important arguments against exploration are as follows: 1. Patients are not willing to undergo surgical exploration unless they can be given some idea of the disease for which operation is proposed. 2. Surgeons are not interested in adding another negative exploration to those they have done in the past. 3. There is a rather strong feeling that a single gastro-intestinal hemorrhage is not an indication for exploration. 4. Many patients have lived for years after gastro-intestinal hemorrhage.

However, it would seem that the arguments in favor of exploration carry more weight, because there is a possibility of discovering an early resectable malignant growth, or a bleeding lesion. Also, there should be some satisfaction to the patient in learning the result of negative exploration: his worry about carcinoma is then at rest. With the mortality of abdominal exploration as low as it is at present, it would seem best to carry out surgical exploration in cases in which there has been more than one episode of concealed gastro-intestinal hemorrhage.

Division of Medicine, The Mayo Clinic.

SERIOUS COMPLICATIONS FOLLOWING THE SIMPLE ANTRO-MEATAL OPERATION; CASE REPORTS*

SYDNER D. MAIDEN, M.D., Council Bluffs

The intranasal drainage of the maxillary antrum, or what is known as the antro-meatal operation, is perhaps the most frequently performed surgical procedure that is employed by most of us practicing rhinology. In selected cases and properly performed, the operation affords entirely satisfactory results and ordinarily is unaccompanied by any serious complications. Its technic

is simple, it is quickly and easily done under local anesthesia without distress to the patient; the normal structures in the nose are not disturbed and so little traumatism is induced or tissue destroyed that the surgeon ordinarily feels that he can recommend the operation without subjecting the patient to any particular risks.

However, providing there is nothing else to consider but the infected antrum in the patient, there are two conditions that should contra-indicate operation. They are acute cases and the presence of an elevation in temperature. To be sure there are instances when one may be compelled to operate in the face of these conditions, but one may expect trouble.

Personally I have always adhered to these principles and in fifteen years of practice have never had any serious complications until one year ago, when misfortune overtook me and within a short period of time I had three patients who developed serious postoperative complications, two of whom died. Either I had been unusually lucky for fifteen years or else unusually unlucky within a period of three months. My experience with these three cases prompted me to relate them in this paper, in order that those of you who have had a like disaster may feel that you are not alone and those who have not met with such a tragedy may take heed and realize that there may be trouble ahead.

In attempting to review the literature I was surprised to find little concerning the systemic complications following the antro-meatal operation. A number of articles have reported such complications following the antrum puncture but in going through the Index Medicus back as far as 1922 I was unable to find any article pertaining to the antro-meatal operation. Dr. Howard V. Dutrow of Dayton, Ohio, reported a case in his discussion of Dr. Mithoefer's paper on "Systemic Infection Following Antrum Lavage," in the Transactions of the American Academy of Ophthalmology and Otolaryngology, 1928. In his case he used a drill to make an opening in the lower meatus for the purpose of lavage. This procedure is equivalent to an operation and should be classified as such rather than as an antrum puncture.

Such a dearth of material in the literature indicates that either these complications are rare, or that they are not reported when they happen. I believe they are not so rare as the literature would indicate and I also believe they are of enough significance to justify reporting, otherwise we may develop a sense of false security towards a surgical procedure of this nature. No one cares to report unfavorable results. It is much more to our liking to report cases with unusually favorable results

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and yet luck may play as important a rôle in one as in the other. We like to discount the element of luck in our favorable cases and attribute the end results to our own ability. Vice versa, we are inclined to hide behind the skirts of lady luck when we meet with disaster. Be that as it may, the cases reported here will be related as they were treated by me.

The technic was the same in each case. Cocain with adrenalin anesthesia was used topically, and the antrum punch, rasp and biters (forward, backward and downward) were the instruments used. The inferior turbinate was not trimmed in any of the cases. No packing was used following the operation.

Case 1. Mrs. S., a well nourished woman, twenty-eight years of age, was seen first by me February 5, 1930, complaining of a cold in the head and inability to breathe through the nose. She gave a history of having had a severe cold in the head about eight weeks previous which never cleared up. There were no headaches and no soreness about the face. There was considerable discharge from both nares which had recently become more purulent. Her eyes hurt some but there was no serious trouble. There was some soreness of the throat. She had never had any previous trouble with her nose and her general health was good.

Examination showed both nares completely closed by a turgesence and boggiess of all the tissue within the nose. The mucous membrane was pale and glistening and covered with slimy mucus. The tissue shrunk with difficulty but there were no septal deformities. She had a very narrow nose. The x-ray showed the antra and ethmoids uniformly blurred on both sides. There was no fever. Antrum lavage disclosed a large amount of gelatinous mucopus in each antrum. She was advised to have an antro-meatal operation on each side, to be followed by treatments for the ethmoiditis.

February 7, forty-eight hours after the antrum lavage, there being no elevation in temperature, the antro-meatal operation was performed on each side. Since the patient was from out of town, she was kept in the hospital. There was no bleeding of any consequence. On the second morning following the operation she had a slight rise in temperature and a small reddened area was noticeable on the bridge of her nose. This was quite sharply outlined and had a leathery feeling on palpation. A diagnosis of erysipelas was made and treatment instituted. In spite of active treatment with serum, violet ray, and so forth, the infection eventually covered her entire head and extended well down on the chest and to her waist line on her back before we were finally able to check its progress. She was critically ill during the height of the disease but finally went on to a satisfactory recovery. Her illness not only left her in a very weakened physical condition, but necessitated the expense of hospitalization for two weeks and the payment of a good-sized bill for serums.

After reaching home she had a delayed serum urticaria, which did not help her mental attitude.

Case 2. Mr. H. J. Y., a well built and well nourished farm hand, forty-one years of age, was first seen by me January 18, 1930. His chief complaint was discomfort from a "large amount of pus dropping down in his throat." He had been troubled for several years but was getting worse. He did not have many headaches, but he had a great deal of trouble with "gas on the stomach" which he attributed to the swallowing of this postnasal discharge. He was annoyed by crusts forming in his nose.

Examination disclosed an advanced case of atrophic rhinitis with crust formations. The turbinate bodies were but small ridges. With antrum lavage a considerable amount of slimy pus was obtained from each antrum. He reported at weekly intervals for irrigations and treatments. He obtained so much relief from the treatments that he wanted to know if an operation would not give him permanent results and relieve him of the trouble of coming in for the treatments. He was told that a permanent opening could be made but was not urged to submit to it. After two more treatments he asked that the antro-meatal operation be done.

On the morning of February 28, in the absence of an elevation of temperature, a window was established in each lower meatus. There was considerable bleeding during the afternoon and evening following the operation; however, it was not more than is usual after any operation on an atrophic nose and did not require any packing. The next day he felt all right and there was no elevation of temperature. During the night he was struck with a severe pain in the left side of the neck and in the left occiput. He was seen the next morning, and had no elevation in temperature. He complained of pain in the left side of the head and neck and down the left shoulder. He had considerable stiffness of the neck but otherwise there were no signs of intracranial involvement. The pain became worse and he gradually lost ability to use his left arm. He was sent to the hospital that evening. His temperature was 101°, pulse 120, respiration 24, leukocytes 10,800, polys 90 per cent, urine negative. The neurologic examination was negative. Aside from the stiffness in the neck, some rigidity of the muscles in the left side of the neck and inability to move his left arm, his physical examination was negative. The nose showed no evidence of an acute infection. The patient ran a septic course for several days, his temperature rising to 102° daily, and one day to 103°. No other symptoms appeared until March 7, five days after entering the hospital, when a swelling in the left side of the neck was discernible. A general surgeon was asked to see the patient. No definite findings could be made out, although an abscess was suspected. The white cell count at this time was 15,000, and the polys 78 per cent. The swelling in the neck increased and the patient rapidly began to fail. On March 10 the neck was incised and a large amount of dark, brownish-yellow pus escaped. Culture of the pus showed

streptococcus hemolyticus. On February 12 incisions were made in the shoulder and over the biceps of the left arm with free escape of pus. The patient died February 15 of general sepsis. No postmortem examination was made. The deductions were that a septic embolus lodged in the vessel deep in the neck, resulting in abscess formation and general sepsis.

Case 3. Mrs. D., aged thirty-five, an unusually strong and healthy woman, the wife of a farmer, was first seen April 10, 1930. Her chief complaint was severe headaches in the forenoon, much aggravated when she stooped over. She did not know that she had a cold in the head, but thought she had had the "flu" during the week previous. She felt tired and "grippy." Her left cheek was tender to touch and ached somewhat and felt "funny." There was a purulent discharge from the left nostril.

Examination showed reddened mucous membrane in the left nostril and congested turbinates. Pus came from beneath the left middle turbinate. Her left cheek was tender to pressure. X-ray showed an opaque left antrum. By irrigation of the left antrum an enormous amount of thick, greenish-yellow pus was obtained. There was no elevation of temperature. The lavage was repeated, along with treatment at home at three-day intervals until April 22. There was no abatement in the amount of pus present at each washing and as the work on the farm was pressing she decided to have a permanent opening made in the antrum. She had had no elevation in temperature at any time. The operation was done April 22 and she was sent to the hospital for the night. She left the hospital at two p. m. the following day, feeling good, and with a normal temperature. That evening about six o'clock she had a slight chill, followed by a headache and an elevation of temperature (99°). The next morning her headache was severe, her temperature 99.6°, some photophobia and stiffening in the neck. She was brought into the hospital and I saw her about eleven o'clock. At that time she was delirious and had all the symptoms of a diffuse meningitis. Spinal fluid under pressure was cloudy, with a cell count of 380+, and 90 per cent polys. No organisms were found. Antimeningococcus serum was given, 30 c.c. in the spine and 30 c.c. in the vein, repeated every six hours. Culture of the spinal fluid showed streptococcus the next morning which was finally proved to be of the hemolytic strain. In spite of all that could be done with energetic treatment she died on May 1, 1930. No postmortem examination was made. I think we are justified in concluding that the infection in this case traveled direct to the base of the brain through the lymphatic or blood vessels from the side of the operative wound.

There is not much to summarize in these remarks. The conclusions drawn by me from these personal experiences are general. Apparently it was not the technic employed that contributed to the end results, as the same technic had been used for several years with no cause for regret, and the same has been used in the past year. It was not

due to operating in acute fiery cases or in the presence of an elevated temperature. The patients were not poor risks physically, in fact, the opposite was true. All three patients were comparatively young and in excellent general condition.

Case one—that with the erysipelas—can be dismissed with the statement that such a complication may follow the simplest incision or surgical trauma.

General sepsis, such as occurred in case two, may also develop at any time without apparent reason, although I cannot help but feel that the atrophic condition in the nose was an important factor in this particular case. There is a change that takes place in the osseous structures of the nose in atrophic rhinitis, call it a spongification or a low-grade osteomyelitis, or what you wish; the bone is soft and spongy and the blood supply is increased. There is always more postoperative bleeding following any surgery in a nose affected by an atrophic rhinitis, and one would expect an embolism to occur more readily under such favorable conditions.

It is also difficult to explain just why such a complication as meningitis should follow, as in case three. There were no cultures taken from the washings of the antra in any of the cases previous to these operations. The two patients who died showed a streptococcus hemolyticus, one in the blood stream and the other in the spinal fluid. Would one be justified in withholding surgical relief in a case of an empyema of an antrum if he knew the infective organism to be that of the streptococcus hemolyticus?

Discussion

Dr. S. B. Chase, Fort Dodge: In considering complications of any operation, our desire is to profit by experience and avoid them in the future if possible. Serious complications may occur from a most trivial procedure; they occur in the hands of masters as well as novices. They probably always will occur, but the problem is to reduce them to the minimum.

Until we understand better the selective action of bacteria or their toxins, and the way to determine such action more accurately; until we are able to estimate more definitely the resistance of the individual to such infection, we will have complications following operative interference.

We may disregard the complications due to faulty technic and operative procedure. We assume that the surgeon possesses the training and technic necessary for a favorable result. Even here the human factor is present, however, and always will be.

It is interesting in reviewing the literature to note that when complications from a certain type of operation are reported, very little is said as to how to avoid such complications. The result is that there

is probably no way in which a complication can definitely be foreseen, it just happens. A combination of a virulent organism and a patient with lowered resistance to this organism always leads to extension from the original field of infection, but there is no way in which this may be determined in advance, or in what form the extension of infection will take place. It may result through the lymphatics, blood stream, skin, bones, et cetera, with either troublesome or disastrous results to the patient. Nevertheless, experience is a wonderful teacher, and past experiences, as shown by countless satisfactory results, should outweigh the fear of possible complications and disaster following tried and proved procedures.

Dr. Maiden fortunately escaped one complication which, while rare, is nevertheless blamed on the antro-meatal operation; namely, acute suppurative osteomyelitis of the superior maxilla and other facial bones. I have had one such complication, and I never want to see another. There have been several cases reported, but no intelligent plan for avoiding this complication has as yet been devised. Again it seems to result from a virulent osteopathic organism in a patient with lowered resistance, syphilis, et cetera, of course, being ruled out. The result is usually death after a more or less prolonged interval.

There is a growing tendency to delay operative procedure where bone is concerned in the operation, until the condition has become subacute. This, however, is not always practicable and again the personal equation and judgment of the surgeon are the deciding factors.

Dr. George C. Albright, Iowa City: The cases which Dr. Maiden has reported bring to our minds again the realization that no surgical procedure should really be called minor. The only unusual thing to be brought out is the apparent paucity in the literature of similar cases. Prior to 1920, the literature is fairly rich in reports of fatalities following such simple procedures as antrum lavage. The difference between antrum lavage and an antro-meatal operation is only one of degree. In both, an avenue for infection is opened up, and pathogenic organisms introduced into the blood stream or tissues, so that although, as Dr. Maiden has pointed out, there are very few reports which can carry the exact title, "Serious Complications Following the Antro-Meatal Operation," there are plenty of reports of such cases, if the line is not drawn too straight.

Although Highmore in 1651 described the antrum, and method of care, it remained for a Dutch physician, Grooch, and John Hunter, to propose intranasal drainage, by way of the inferior meatus. Krause and Mikulicz were the first to describe and carry out the modern antro-meatal operation. The dangers of lavage, and I believe we are justified in assuming of the operation, have been pointed out by Krause, Neuborn, Henrici, Hajek, Kelly, Claus, Bowen, Killian, Culbert and others. (See Dabney, Surg., Gynec. and Obst., xxii, 325, 1915.) Reidar Gording in 1916 reviewed the literature to date and summarized the dangers of antral manipulation.

Before concluding that the complications which Dr. Chase mentioned are due solely to the operation, we must assume two things: first, that the invasion of the system, either general or cerebrospinal, did not precede the operative interference. This would be hard to do. The literature is full of cases of the kind described by the essayist in which these complications supervened without any operative interference. It is true that in his cases, the erysipelas, the septicemia and the meningitis were subsequent to operative interference, but the organisms might have been in the blood stream before his therapeutic measures were instituted. Second, although there may have been no general preoperative involvement, does the mere fact that it occurred after operation prove that it was the result of the operative procedure? "Post hoc" does not necessarily mean "propter hoc."

Dr. Maiden and I happen to have been in practice exactly the same length of time. We happen to have had exactly the same number of serious complications following an antro-meatal operation. His, however, were deferred until 1930, after he had been in practice for fifteen years. Unfortunately, my three cases came in 1917, 1918, and 1923, two, three, and seven years after entering practice. These three cases I wish to report briefly to you, so that the rhinologists of the future, who may be interested in this condition and its consequences, may not find the literature quite so barren as has Dr. Maiden.

Case 1. M. R., aged twenty-two, caught a hard cold on April 11, 1917. There was general malaise. The temperature was 99.8°. On suction pus was obtained on both sides. She was sent to the hospital for rest. On April 16 the right antrum was punctured; much thick pus was removed. Antro-meatal operation was done at once. On April 17, the temperature was 104.8°. There was diffuse abdominal tenderness. The blood count was 39,600. Antrum irrigation was easily done; a good deal of pus was removed. The patient was seen by an internist, who reported that although there was no definite pneumonia, the physical findings plus diminished chlorids in the urine, were strongly suggestive of pneumonia. On April 9 the white cell count was 41,000, with 90 per cent polys; on April 20 it was 50,000. She was seen by a surgeon April 20 because of abdominal tenderness which had been present since April 17, but which the internist regarded as functional. The diagnosis was peritonitis. Laparotomy was done at eleven p. m. under gas anesthesia. The patient died at 1:45 a. m. Permission for postmortem examination was refused. The diagnosis was septic peritonitis, probably central, with metastatic pneumonia.

Case 2. Dr. L. A., aged twenty-four, was first seen April 12, 1918, after five days of severe head cold. He had marked frontal tenderness, the right eyelids were badly swollen, the temperature was 105.6°. Suction brought considerable discharge. The temperature varied the next two days from 101° to 104°. On April 14 tenderness developed over the right maxillary sinus. He also had tenderness and

stiffness of the right ankle. The patient was irrational. Each time the turbinates were shrunk and suction used, the temperature would drop. At nine p. m. we decided to do an antro-meatal operation. He was seen during the next two days in consultation with Drs. Rohner and Rowan. The diagnosis was septicopyemia, secondary to the upper respiratory infection. The patient died April 19, seven days after his examination.

Case 3. A. C., aged about twenty-five, was first seen April 27, 1923, with an infection of her left maxillary sinus. Antrum puncture was done and a good deal of pus removed. On April 30 a second puncture again revealed a large amount of pus. Antro-meatal operation done at once under local anesthesia. Some headache followed the operation which subsided under small doses of aspirin. Her convalescence from this date up to April 6 was rapid and uneventful. On May 6, antrum washing was clear. The patient was discharged. On May 8, the patient noticed a little headache. On the morning of May 9 the headache was severe. The patient complained of blurring of vision and diplopia. She was seen at seven a. m., at which time she had occipital tenderness and stiff neck. Kernig reaction was absent, the abdominal reflexes gone. One hour later she was seen by internist in consultation. There was divergent strabismus, and the Kernig reaction was now marked. Ankle clonus and patellar clonus were marked. She was transferred to the hospital at once, and vomited en route. Lumbar puncture showed no excess pressure; between 4,000 and 5,000 cells to cubic millimeter. Culture showed pneumococci. Blood count was 40,000. There was suppression of urine. On the morning of May 10, the patient awoke at four a. m. and was rational. The reflexes were much improved, though still present. There was no strabismus. The temperature was 99.8°. Lumbar puncture showed 12,000 cells per cubic millimeter. Progress was fairly satisfactory for two days. The cell count dropped to 1780. The patient ran a septic course from the 12th to the 15th of May, the cell count in the spinal fluid remained high. The patient died May 15. The diagnosis was meningitis.

In summary, we have one case with an antrum that was washed out, operated at once, followed by septic peritonitis and death. Cummings reports in the *Michigan Journal* cases of peritonitis following upper respiratory infection. The second case was a generalized septicopyemia following an antro-meatal operation, but in view of the findings, the septicemia must have been present before operation. Drainage of the antrum was done, in the hope of draining the focus which was feeding infection into the blood stream. The third case is one that is much harder to understand. A simple antro-meatal operation, an uneventful recovery with antrum washing clear, and then fourteen days after operative interference, the lighting up of an acute fatal meningitis. Surely if nature were walling off an infection from the antrum, the fourteen days would have given ample time. Were the pneumococci introduced into the cerebrospinal fluid via the blood stream or lymphatics?

CORONARY THROMBOSIS WITH CARDIAC INFARCTION*

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Coronary disease with cardiac infarction presents one of the most important phases of cardiology, and one of the most serious problems that confronts members of the medical profession. This disease is not confined to the aged, as once was thought, but is common among patients of middle and early middle age. Within the last two years, at the clinic, we have had two patients who were aged thirty-four and thirty-five years, respectively, and who died from coronary thrombosis and cardiac infarction. These cases were not diagnosed correctly before postmortem examination; because of the ages of the patients, coronary thrombosis with infarction was not considered. Disclosures at necropsy proved to be very unusual. The hearts were markedly enlarged, which was thought to be the result of cardiac infarction. If disease of the coronary arteries affected only aged persons, and those who had lived out their normal expectancy of life, it would not be such a serious condition, but it is common to read in the daily papers that some prominent, active person, in the prime of life, has fallen dead from this affliction. These cases are often called instances of acute indigestion, or of ptomaine poisoning.

Whether this disease is more prevalent at present than it was in the past, or whether it is now better understood and consequently more accurately diagnosed, is not yet settled, but it would appear that the disease is on the increase.

For many years coronary sclerosis was of interest mainly to the pathologist, and only in relatively recent years has there been much general clinical interest in disease of the coronary arteries. This subject probably has been more extensively investigated and universally written about in the last decade than any other phase of cardiology. In spite of this extensive writing and discussion, coronary thrombosis with cardiac infarction is probably wrongly diagnosed as often as, if not more often than, any other cardiac disease.

There are few diseases concerning the etiology of which so little is known as is known about coronary sclerosis. There are several factors, such as over-eating, over-drinking, excessive smoking, overweight, stress and strain of modern living, and lack of rest and relaxation, that investigators believe predispose to this condition.

In typical cases of thrombosis with cardiac infarction the diagnosis as a rule is not difficult. In some of the atypical cases, the diagnosis is difficult

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to establish, but this latter group represents only a relatively small percentage of all cases. Thrombosis with cardiac infarction has to be distinguished from several other conditions, the more important of which are acute surgical conditions of the upper part of the abdomen, such as ruptured viscus, acute disease of the gall-bladder, and mesenteric thrombosis; also, pulmonary embolism, certain types of acute pleurisy, acute pericarditis, mediastinitis, intercostal neuralgia, root pains, myositis, certain types of asthmatic attacks, and angina pectoris as the result of coronary sclerosis.

A previous history of disease of the gall-bladder, or of gastric or duodenal ulcer often will help in distinguishing these conditions from thrombosis with cardiac infarction. Rigidity and tenderness of the abdomen also help to establish a diagnosis of a condition that is not related to the heart.

Occasionally, and especially at onset, it is difficult to distinguish pulmonary embolism from acute coronary thrombosis with cardiac infarction. As a rule, the situation and character of the pain are aids. In most instances the pain in pulmonary infarction is made worse by breathing, and especially by deep breathing. Hemoptysis is much more common in cases of pulmonary embolism, although it may occur in cases of acute cardiac infarction. In the majority of instances the electrocardiographic tracing will establish the diagnosis. The character of the pain, its severity, the regions to which it is projected, and its duration, as well as the condition of the patient, often will suffice to separate acute thrombosis with cardiac infarction from myositis, mediastinitis, and root pain. In a small proportion of cases, in which extreme dyspnea, and not pain, is the outstanding feature, a distinction from asthma must be made. This is rather difficult if the patient has, coincidentally, an injured myocardium. Administration of epinephrin sometimes will aid in establishing the diagnosis. However, should thrombosis with cardiac infarction be present, some serious, untoward injury may result. I have experienced instances of this, consequently I never feel safe in giving epinephrin unless I am reasonably sure that the patient has an asthmatic attack. If epinephrin is to be tried, it should be administered in very small doses.

In distinguishing angina pectoris from acute thrombosis with infarction, the circumstances under which the pain has its onset are a help. The pain of angina pectoris usually comes on in the course of bodily exercise; however, in some severe cases, it may come on even when the patient is at rest. The pain in thrombosis with cardiac infarction, as in angina pectoris, often comes on while

the patient is exercising, but frequently it comes on while he is at rest or asleep. The site of the pain, and the regions to which it is projected are practically the same in these two conditions. The pain in both angina pectoris and thrombosis with infarction is practically always substernal; it may be substernal and precordial, but rarely precordial only. The regions to which it commonly is projected are the neck, shoulders, and down the arms. There are other regions to which the pain may be projected, but those mentioned are the more important.

The pain in angina pectoris is usually short and lasts only a few minutes, whereas the pain in thrombosis with infarction usually lasts much longer; it may last from one to forty hours. There is a fairly practical rule to go by, that if the pain lasts one hour or longer the attack is usually due to thrombosis with infarction and not simply to angina pectoris. The patient with angina pectoris is often immobile, whereas the patient with thrombosis and infarction is often restive and will walk about. Shock is absent in angina pectoris but present in thrombosis with infarction. Dyspnea is more pronounced in thrombosis with infarction. Vomiting is rare in angina pectoris but fairly common in thrombosis with infarction. The pulse is usually unchanged in angina pectoris, whereas in thrombosis with infarction it is often weak and rapid. The heart sounds are usually normal in angina pectoris, while in thrombosis with infarction they are often distant and of poor quality. The blood pressure in angina pectoris is normal, or there is a slight rise, but in thrombosis with infarction it is lowered. In some instances there is a marked fall in blood pressure. Friction rub often is present in thrombosis with infarction but absent in angina pectoris. Signs of heart failure are often present in thrombosis with infarction but absent in angina pectoris. The temperature in angina pectoris is normal, whereas in thrombosis with infarction it is subnormal at first, followed by a rise; usually the temperature is not high, but it may go to 101° F. There is leukocytosis in thrombosis with infarction after a few hours, but in angina pectoris the leukocyte count is normal. The electrocardiogram is often abnormal in angina pectoris, while in thrombosis with infarction it is usually diagnostic. The electrocardiographic tracing in thrombosis with infarction depends on several factors; the length of time that has elapsed after the onset of the infarction, whether there is one infarct or many, or whether the occlusion is of the right coronary artery or of the left.

Usually a definite sequence of changes in the R-T segment follows acute thrombosis with car-

diac infarction. This is usually followed by inversion of the T wave in lead I and in leads I and II, or in leads II and III. In a typical electrocardiographic tracing made in a case of occlusion of the left coronary artery, producing infarction of the anterior portion of the left ventricle and of the apex, there is an elevated R-T segment in leads I and II, and a depressed R-T segment in lead III. There is also an inverted T wave in lead I and in leads I and II, and an upright T wave in lead III. In a typical tracing made in a case of occlusion of the right coronary artery, with infarction involving the septum and posterior wall of the left ventricle, there is elevation of the R-T segment in leads II and III, a depressed R-T segment in lead I, inversion of the T wave in leads II and III, and an upright T wave in lead I.^{1 and 2}

The treatment of acute thrombosis with cardiac infarction is to secure complete rest and to control the pain, and this is best accomplished by administration of morphin. It should be administered in doses large enough to control the pain. It may have to be given in doses of 0.5 grains. Amyl nitrite and nitroglycerin are contra-indicated because the blood pressure is already lowered and these drugs would tend to lower it more. Digitalis is given by some physicians but not by others. I do not give it unless there are symptoms of cardiac failure, and then in relatively small doses, certainly not enough to produce toxic symptoms.

These patients should be kept in bed for three to six weeks, and then, after they get up, they should be kept quiet for six to eight weeks more. It is estimated that about ninety days are required for these infarcts to heal. Prognosis, of course, depends on several factors; extensiveness of the infarction whether or not canalization takes place, development, or failure of development of collateral circulation, and the general condition of the patient. Not as many patients die in the original attack as was once thought. It is believed now that from 30 to 50 per cent die in the original attack. However, the myocardium often is left so severely injured that it is practically incapable of carrying on its work. Some of the patients with infarction make excellent recoveries, and are able to carry on. Many of them, with proper care and precautions, are able to lead rather active and useful lives for many years.

A physician whom I had the privilege of examining about two years ago, and who had had a coronary thrombosis with cardiac infarction two and a half years before I saw him, was in the audience on the evening this paper was read. He informed me, at that time, that he was in fairly

good condition, and that with proper rest and care he was able to carry on a large part of his work.

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OUR POOR RELATIONS *

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The title, as read, is something of a misnomer, characteristic of many of the writings of the day. How often are we attracted by a head line, which, upon investigation, proves to have little bearing upon the meat of the story. The heading, as noted, gives only a slight hint of the identity of the real subject, and not until we add the tail, do we recognize the animal. What I intend to discuss really is, "Our Poor Relationships," which enables the writer to save his face by changing the ridiculous to the sublime and offering a very serious subject for your consideration.

What ethical position do you men occupy with your fellow specialists, your medical colleagues in all branches of scientific medicine, the hospitals and the community at large? Are you really what you claim to be, a leader in everything that concerns the health of your city? Are you constantly steering upstream, bucking cross currents of a misinformed public sentiment or laying your course contrary to the headwinds of blatant pseudo-scientific propaganda as broadcast on the commercial air currents? Or are you a derelict, drifting with the current and wind, letting your mental processes deteriorate with the dry rot of diffidence, and your physical equipment become obsolete through complacency? It behooves us to attend the meetings of our state and national societies and to spread our knowledge to the laity by appearing before audiences, both medical and lay, as the opportunity offers. In that way only can we hope to gain favorable consideration and counteract the mass of health misinformation which is now being carried to the very firesides of those whom it most concerns.

So I offer several criticisms of existing conditions, which censure, of course, consists of purely personal opinions which you are at liberty to treat as you care in the discussions. These lines are based upon conditions as they seem to exist in my own community, but a casual peep around would seem to verify the suspicion that such a state of affairs is similar in other cities.

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It appears to the writer that not sufficient ethical consideration is extended by each otolaryngologist to similar specialists in his own immediate circle. I know that when one doctor's patient seeks further light, on his own initiative, at the hands of a second medical attendant, regardless of what has been done before, no attempt is made by the second consultant to ascertain the previously found data and compare it with his findings. Each one seems to delight in trying to get the goods on the other fellow, and the patient has to pay the bills, as usual. If the eye and ear men in each community could organize in some sort of way that would permit a more fraternal feeling and freer spirit of cooperation, it would redound greatly to the credit of its members and the benefit of the laymen. I recognize the right of the patient to change medical attendants whenever he pleases, but such action on the patient's own initiative should not justify medical piracy, which should be, and would be, absent if the above mentioned organization could be effected in each community.

What usually happens is that neither consultant is willing to concede that the other could possibly know as much about such things as himself, and therefore gives no consideration to the results of the other's examination or treatment.

A sane viewpoint proves the fallacy of such ideas, as we all get about the same schooling and training, have access to the same type of post-graduate work and are certified by the same boards of ophthalmology and otolaryngology, after taking the same examinations. We belong to the same or similar national bodies, are accepted on the staffs of the same hospitals, have the same grade of patients and use similar equipment in making examinations and arriving at our conclusions. Then wherein lies the difference in specialists? Chiefly in the mind of the individual.

What is your reaction to the general practitioner who removes tonsils, practices gynecology, obstetrics, urology, dermatology, fits glasses, treats goitre, does major surgery, etc., etc., *ad libitum et ad nauseam*? Are you willing to admit that he does a grade of tonsil work that entitles him to encroach on your field and be permitted to have access to the hospitals with his tonsil patients? Do you think he will recognize your specialty if you attempt to treat pathologic conditions entirely outside of our field which belong to the domain of general medical practice?

The American Board of Ophthalmology and Otolaryngology certainly do not concede to this type of man similar standing with you who have met their requirements and have been awarded

their certificates entitling you to general recognition as specialists. Nevertheless, your hospitals permit the general medical practitioner to run in as many tonsillectomies as he wishes. If you acquiesce to such a procedure, you are certainly admitting that he can do this operation as well as you, but the results of his work demonstrate that he is not capable of doing finished tonsil surgery. Twenty-five years' experience in handling this kind of case convinces me that a good tonsillectomy is a decidedly technical manipulation, the best results being shown by the man who performs the largest number of tonsil operations. Tonsil surgery holds a certain glamor for the inexperienced operator, and if he has had only a small number of such procedures, he usually thinks that his technic is on a par with that of the best surgeons.

It is up to the local throat men to so manage that no such exploitation of tonsil patients is tolerated in the hospitals, and that only those duly qualified, be permitted to operate in the institution. This should be easy to handle, as the hearty cooperation of those men on the hospital staffs not attempting this operation should ensure the adoption of rules that will put a stop to such an undesirable practice.

Occasionally we are called in consultation by a general practitioner to diagnose a condition wholly within our field, or one associated with a general condition. The simple diagnosis may be made, but it is not fair to all concerned to delegate the treatment of the special condition to the general medical attendant, as that invites criticism if the diseased condition should happen not to clear up promptly. You have assumed responsibility and should insist on personal direction, if at all possible.

On the other hand, I feel that it is a great mistake to treat a general condition, which may be the cause of symptoms of disease in our field. For instance, a luetic eye, nose or throat condition should be put into the hands of a competent syphilologist for treatment, not merely until the special organs in which we are chiefly interested have cleared up, but until the syphilis has been eradicated. This also applies to the various anemias, diabetes, nephritis, and tuberculosis.

What shall we say to the patient who shows an undesirable result following a tonsil operation? If you performed the operation, make the necessary repairs without charge. If one of your local confreres did it, send the patient back to him, if feasible. Where the job was done by a general surgeon, let your conscience be your guide. Certainly never try to patch up another surgeon's

work without a detailed explanation to the patient and his friends. It is up to us to use real salesmanship and prove by demonstration that there is a difference between our work and that done by the general practitioner.

Next, how should we regard service in the various clinics, charity and otherwise. I feel very strongly that it is not incumbent upon the medical profession to consider particularly the medical needs of the indigent. That is not our problem especially, but is a community affair, to be handled and financed by the proper county authorities. In Scott county, all medical service is placed in a blanket contract with the county supervisors and the county medical society, as principals. Surplus funds go into the treasury of the county society. Thus medical relief is classified as a commodity, such as food, rent, heat and clothing. The county medical society handles the work in a centralized clinic, which solves a decidedly vexatious problem.

However, this does not take care of the health needs of the part-pay class, whose economic status does not permit the acquisition of the type of medical service which his need demands. Consideration must be given to this problem, as even the medical procession is decrying the high cost of medical and hospital service.

Now that the Scott County Medical Society is so well organized, it would seem to be rather a simple procedure to extend the services to part-pay patients for a fee commensurate with their incomes. These proceeds could be pooled and prorated to those members of the medical society who are active in the working of the clinic. To the minds of those who have seen such a plan work out, it is very evident that it increases tremendously the financial returns to the profession. This is explained by the very great demand for such service by a class of people who at other times dodge all but the most pressing medical need because of economic stress.

There is no question that a great deal of money is being diverted, or dissipated, which might well be turned into medical channels, because there happens to be no outstanding medical need when such funds are in hand. If a continuous supply of high class medical service was made available by the operation of the "part-pay" clinic idea run on ideal lines, then the influx of the tremendous sums available in the hands of this class of people, who compose at least a half of our population, would be attracted to the "clinic" coffers.

"But," one doctor exclaims, "people don't want mass medical service, they want personal service." To my mind this condition exists chiefly in the minds of those physicians who have a greater desire

to please the patient than to render efficient service. The kind of people who would patronize such a clinic chiefly want results. Those who want a superabundance of personal service will not object to paying the regular rates for private consultations.

The lay promoters of the "part-pay clinics" of the larger cities derive a tremendous financial profit from the operation of these clinics. It behooves us to get "part-pay clinic minded," as all the present-day agitation on medical and health measures is bound to bring forth some definite plan for handling the health needs of the middle class of people. A solidly united medical profession is the only defense against great social changes which will work to our detriment.

If we allow lay agencies to dictate the policies by which our services are to be rendered, then the capital which should be ours, will be divided among outsiders. Nobody but physicians should derive financial return from the sale of medical services. The "part-pay" idea offers a maximum of service to the laity and a maximum of return to the medical profession.

It would seem that these "part-pay" clinics should be managed by the county societies as a whole, rather than by a group of individual doctors. Only in this way may we avoid those petty dissensions and jealousies to which even doctors are subject.

SUMMARY

By local organization may we hope to promote a better fraternal spirit among specialists.

We must keep our work in the hands of our own kind.

We must insist on treating our own cases in consultation.

We must turn over to the internists, the general treatment of our cases.

We should not protect the doctor who encroaches on our field.

We should get "part-pay clinic minded."

Discussion

Dr. James E. Reeder, Sioux City: In answer to Dr. Hands' first question concerning our ethical relationship to each other, I wish to state that the ethical plane in my city, I feel, is somewhat higher than that assumed by Dr. Hands in general.

There is one reason in particular I wish to mention which accounts for this, and that is, we are in business together and we have our meetings every few weeks, and as a result of these contacts each of us has discovered that the other fellow is not so bad after all. I am sure there is not one who would deliberately censure one of his fellow otolaryngolo-

gists. We have all benefited as a result of this attitude.

In answer to his second question, concerning the general practitioner, this is a problem that must be solved through our State Board of Health and the medical profession.

We know it is unfair to the public to turn a young man out with four years of medical training and one year's internship and permit him to assume all the activities in the different fields of medicine—then expect him to be qualified as a general practitioner. We are already beginning to show improvement along these lines through the American Board of Ophthalmology and Otolaryngology. As a result of our activities other specialties are forming similar boards which I think in time will be so effective as to create legislation permitting a university to certify a graduate as qualified in a particular branch of medicine. He will in turn be certified by the State Board of Health, and his patients will be assured of his fitness for practicing that specialty.

We have attempted to curb the activities of the general practitioner in my community but have accomplished very little. Some of the heads of the hospitals have agreed to cooperate with the profession, but so much direct and indirect pressure was brought to bear on the hospital boards, that we had to acquiesce and permit the general man to practice obstetrics and perform tonsillectomies. It seems to me that one place to rectify the situation is at its source where we turn out the finished product at our universities. I am quite sure this will come in the not far distant future.

In regard to the charity clinics, we have had quite a round of experiences in our community. In fact, during the last attempt, the number of supposedly indigent people receiving service amounted to four per cent of the total population. Conditions got into such a chaotic state that the county medical society closed the free clinic. We are now attempting to operate a clinic strictly to take care of the indigent sick and injured with a small compensation to the profession which is to be paid by the county and a welfare fund. We have not been in operation long enough for me to give definite information as to what the outcome of this experiment will be, but I have long ago come to the conclusion that no physician should render services without compensation and I am sure I express the sentiment of the entire profession when I make this remark.

I have had no experience with part-pay clinics, although the idea seems feasible. When we think that two and a half billions are spent annually in the United States for medical care and the medical profession receives only twenty-five per cent of this sum, no doubt the elimination of individual practices with cooperative work under one roof of a group of men, such as a county society, could enhance the work as well as the material gain. Only with a united front and concentrated action could we ever hope to accomplish anything in the way of defense against the economic social changes which are very

rapidly taking place in our country along the lines of medical care.

Dr. Howard D. Fallows, Mason City: In touching on the medical economic situation, Dr. Hands has introduced a subject that demands immediate and careful consideration. There are other subjects in his discourse on "Our Poor Relations" that I find it difficult to discuss diplomatically.

Taking up briefly the matter of leadership in the health of the community in which we live, it is my opinion that this is something to be handled, not by the individual, but by a unit,—either the county medical society or committees appointed by it, through the press in each community, toward the end of enlightening the misinformed public on pseudo-scientific propaganda.

As for consideration for a competitor in consultation, this varies in different communities according to the attitude of the medical men toward each other. If you can personally "rub elbows" with your colleague and enter into a friendship not alone fraternal, a spirit of cooperation is bound to ensue. It is the patient's privilege to change doctors whenever he chooses and, if a spirit of cooperation and friendship exists between his medical advisers, he will respect their judgment and treatment and, at the same time, will not lose his confidence in them, as sometimes happens when two doctors do not agree.

The general practitioner who professes to excel in surgery, internal medicine, gynecology, or eye, ear, nose and throat diseases, usually does not stand very high with the medical profession in his community or the surrounding territory, and he relies on advertising for his prestige. This often brings him a lucrative practice, but his treatment is not always advantageous to the patient. This type of specialist is barred from recognized hospitals and, therefore, usually maintains his own workshop, aided by a clientele that helps him to retain his practice.

Tonsil surgery offers to the general man an added income that looks very attractive and, in the majority of cases, he honestly feels that his work compares favorably with the specialist's. If he is a recognized man, he cannot be barred from doing such work in the hospitals. The solution, I believe, lies in the education of the public—and how can this best be brought about?

I agree with Dr. Hands that when called in consultation with a general man to diagnose a disease in our field, if we take the responsibility for our particular work, we should at least assume personal direction. On the other hand, if it is a case for the internist, the urologist, or some one else, it should be handled by that person.

To me, the most important part of the doctor's paper for discussion is the economic medical question of "part-pay clinic," as he terms it. In almost every county there is some form of agreement between doctors and supervisors regarding pay for the indigent, but the so-called "white collar" class is the big problem confronting the profession today. From various articles now appearing in the magazines, dissatisfaction at the high cost of medical care has never

been so great as at the present time. The matter is now under a five-year survey, headed by the Secretary of the Interior, Dr. Wilbur, and we are looking forward with great apprehension to the result. In Europe the drift has been for state medicine, and at the last meeting of the American Medical Association in Detroit, the retiring president and the House of Delegates gave out the information that socialization of medicine—which is now suggested in England—is headed this way, unless the medical profession takes steps to enable the "white collar" class to cope with medical costs. Socialization of medicine, or state medicine, it would seem, is bound to result in lowering the standards and the prestige of the medical profession. Dictation by the laity is looked on with dismay and would be humiliating to us, but this much is certain, if the profession does not come to some satisfactory solution of this question, the laity, or the state, or the insurance companies will take the matter out of our hands and solve it in their own way. After discussing the problem with many other doctors and reading the opinions of others in various magazines, I must confess that I am farther away from a solution that would seem feasible and practical than when I first began a study of it. Dr. Hands offers the "part-pay clinic" as one of the many suggestions for your consideration.

Case Report

POSTCECAL, RETROPERITONEAL, GANGRENOUS APPENDICITIS

L. H. HEETLAND, M.D., Sibley

Under the impression that certain types of appendicitis are more common than is generally believed, I wish to report this case, hoping that it may stimulate others to report cases, which though not extremely rare, are more or less unusual.

It has been our experience that postcecal cases are frequently gangrenous, and also that they are not readily recognized as cases of appendicitis until late, due to the lack of early peritoneal involvement, the symptomatology of which includes acute pain, tenderness over McBurney's point and more or less muscular rigidity. The pain is dull, vomiting is apt to be absent and the patient is likely to become toxic before the true nature of the trouble manifests itself to the average physician.

During the latter two weeks of August there were several families in Sibley having diarrheal conditions popularly called "intestinal flu." In one family of three children, one boy about six

years of age was quite sick, and his brother and sister (both older) were also affected, but to a much lighter degree. The hot weather was thought by the parents to be responsible. A physician was called and prescribed for the boy, the mother reporting his condition over the telephone during the next two or three days. About four days after his visit he was informed that the girl was much worse. He was called at eleven p. m., August 24 and gave it as his opinion that the girl had a "ruptured appendix," which diagnosis led to two other physicians being hastily called into consultation. The points I wish to make here are that this girl had been sick for several days before the symptoms became alarming to the parents and that she was supposed to be having the sickness so prevalent then in the community. This led to delay.

Operation was performed the next morning. There was no free pus in the abdominal cavity. With great difficulty the cecum was brought up into the incision. On its under surface appeared a small, reddened, worm-like mass, less than an inch in length. By forcibly bringing the cecum to the surface this was recognized as the tip of the appendix, the body and base of which were evidently back of the peritoneum. Stripping back this peritoneum, a large, long, black mass was found and identified as a necrotic appendix. The part first mentioned, which was within the abdominal cavity, although red and inflamed, was not gangrenous; while the part which was retroperitoneal was gangrenous, and probably had been for several days.

This completes the report, except that the author having lately read about the use of antitetanic serum in cases of gangrenous appendicitis, and knowing that one San Francisco surgeon always has a syringe loaded with 1500 units of tetanus antitoxin present at every appendix operation, which is used only if the appendicitis is of the gangrenous type, administered this serum before the patient recovered from the anesthetic. The severe toxic condition of the patient and the absence of any food for three days prior to the operation, together with the findings referred to, would not seem to agree with the prompt and uninterrupted recovery. We are inclined to believe that the tetanus antitoxin may have proved instrumental in her speedy recovery. The theory, so I am led to believe, is that the bacterial flora, in these gangrenous cases of appendicitis, includes some anaërobe, which though it may not, *per se*, instigate the appendicitis, it is responsible for the toxicity, and frequently for the fatal termination.

College of Medicine State University of Iowa

CLIMACTERIC CHANGES

E. VON GRAFF, M.D.*

Professor of Obstetrics and Gynecology

The various disturbances connected with the "critical age" in female life known to laity and physicians alike are often not seriously considered by the latter, and have become a kind of "step-child" in medicine which frequently happens with fields that border between pathology and physiology.

The innumerable and various symptoms which women may show at this time are very often disregarded by the physician, and the only answer often given the patient is that she should not worry about her condition as it is an unavoidable consequence of her age and will subside in a short time without any treatment.

This attitude is absolutely wrong because it gives poor service to the patient, and the physician omits many opportunities for satisfactory treatment, since most of the symptoms can be alleviated by proper advice once they are recognized as being due to the climacterium. For the physician, furthermore, the climacterium presents so many yet unsolved questions, that it would be worth while to spend more time and attention on the problems of this period.

By climacteric age, we designate that interval in the life of women when the function of the ovaries becomes more and more deficient, up to their entire involution. Although the most familiar clinical sign is the change of the menstrual flow, it must be kept in mind that women may have climacteric symptoms when menstruation is still regular, as well as those which may occur only after the cessation of the menses.

It is often forgotten that not only the ovaries but all of the endocrine glands undergo functional change at about the same time. The functional disturbances of the ovary itself can actually be held responsible only for the menstrual disturbances and the changes in sexuality. All the other symptoms may be explained by dysfunctions of the other endocrine glands, or by disorders in their physiologic cooperation started probably by the primary inefficiency of the ovary. To support this conception, it may be mentioned that women are disposed to develop thyroid toxicosis whenever the ovarian function undergoes a profound change, such as at puberty, during pregnancy,

after entire elimination of the ovarian function by operation or irradiation, and last but not least, during the climacteric involution. In a similar way the frequently observed rise in blood pressure may be due to an increased output of adrenalin, which is not adequately controlled or neutralized.

The age at which women are subjected to the climacteric changes varies from the 36th to the 56th year. As already mentioned, it is of importance to know that at a comparatively early time symptoms which can not be explained by actual findings may be the very first manifestations of the threatening climacterium. To a great extent the onset of ovarian involution is dependent upon hereditary and racial conditions. The average age for menopausal changes in Chinese women is 40 years, in colored people 35 years, and in the Eskimo women from 30 to 35 years. In addition there are external conditions such as over-feeding or under-nourishment which are of an etiologic significance. General disease conditions may hurry the involution of the ovaries.

The average duration of the climacterium is one to two years, although it may last longer, and further symptoms may appear many years after the menopause.

One of the most striking signs of the climacterium is the change in the bodily appearance which, of course, is dependent upon the constitutional type to which the individual belongs: the *Pycnica*, the well nourished, good tempered, "ideal mother" has little change except for an increase of subcutaneous fat, and a gain of an invincible matronly serenity. A woman with an *asthenic* constitution grows too fat to be well proportioned because of the poor function of her connective tissue apparatus producing pendulous abdomen, descensus, and prolapse, and will be bothered by symptoms resulting from the loosening of the fixation of other abdominal organs, enteroptosis, nephroptosis, etc. The women belonging to the inter-sexual, virile type may or may not increase in weight and show a more marked development of their mannish characteristics, namely in voice, facial expression, and growth of beard.

Regardless of the constitutional type, an increase of the subcutaneous fat in the climacteric age is more often the rule, although it may be absent for hereditary reasons.

Reports of the frequency of the physiologic climacterium without annoying symptoms vary between 20 and 75 per cent. The climacterium is classified as pathologic when one of the symptoms gives the woman sufficient trouble to cause her to consult a physician for relief.

*Editorial Assistance by E. B. Woods, M.D.

The most popular symptoms as previously mentioned, are the irregularity of menstruation and the long duration and great intensity of bleeding. The reduced frequency of the menstrual periods which may occur only at intervals of six to eight weeks, is obviously due to the reduced activity of the ovaries. The frequent menstruations in short intervals of one to three weeks instead of four, may result from a deficiency of corpus luteum which is not sufficient to regulate the development of the follicles. The longer duration and excess of each bleeding is partly due to a reduction of the muscular fibers in the uterine wall with an increase of interstitial connective tissue elements (sclerosis of the uterus), resulting in a diminished contractability of the organ and to an excessive development of the premenstrual decidua. Generally speaking, the climacterium seems to favor "excessive" growth, most of the incidents of polyposia of the uterine mucosa and malignant tumors occurring at this time.

The occasional cases of first conception at the climacteric age and the frequent "blooming" of the entire sexual emotions at this period justify the conception that there are women who gain their full female maturity only under the influence of the uncontrolled activity of the involuting sex gland, i. e.,—"critical age."

The treatment of every climacteric bleeding must be started with curettage accompanied by a thorough microscopic examination of the curettings to determine the absence or presence of malignancy. Only following this, may medical or irradiation therapy be used.

Besides the climacteric disturbances of menstruation and the changes in the sexual reactions which are closely dependent upon the ovary there are numerous nervous symptoms which are without close relationship to the uro-genital organs such as hot flushes (found in 90 per cent), night sweats, spells of dizziness, (which are more or less due to increased tonus of the sympathetic nervous system) buzzing in the ear, headache, and high blood pressure.

Sometimes such marked organic symptoms are present that organic disease may be simulated. For example, cardiovascular disease may be suspected when palpitations, spells of dyspnea, and periods of high blood pressure are found; and again gastrointestinal disease may be looked for when hic-cough, vomiting, hyperacidity, constipation, or diarrhea occur. Occasional very severe pains in the joints or bones, especially of the pelvis, must be mentioned. In all such cases a careful examination has to be performed in order that one does not overlook a real organic disease. The conclusion

that the climacteric condition may be responsible for the disturbances is only allowed when the organism has been found to be perfectly normal. Sometimes the frequent and sudden change in the seriousness of the symptoms and the shifting neurotic character of the pains may help to detect the climacteric etiology.

In a third group there are a number of pathologic conditions frequently found in the pelvic organs during the climacterium. Pruritis of the vulva can appear as a primary or secondary symptomatic condition, often refractory to every treatment. The earlier the treatments are started the better the results. Painting with 3 to 5 per cent solution of phenol, 10 per cent alcoholic solution of salicylic acid, 10 per cent solution of nitrate of silver, or one application of soft x-ray, often gives at least temporary relief or complete cure. In patients presenting chronic eczema and leukoplakia following pruritis, the development of cancer has been noted in 10 to 15 per cent.

An eversion of the urethral mucosa—*urethral caruncle*—is seen rather often. This condition, although the real cause is yet unknown, probably develops because of the shrinking of the submucous connective tissue.

A very frequent complaint during the climacterium is watery, mucous, or purulent and bloody vaginal discharge, caused by hypersecretion of the cervical glands and increased transudation from the vaginal wall. Purulent and bloody discharge is sometimes due to a colpitis which frequently develops at this time as the changed chemism of the vaginal transudation admits the growth of various saprophytic and pathogenic bacteria, and no longer protects and favors the exclusive growth of the vaginal bacilli. The fact that the degeneration of the superficial epithelium layer of the vagina is not matched by an adequate regeneration results frequently in small erosions of the vaginal wall offering suitable condition for the development of bacteria.

Finally, mention should be made of two well-known symptoms—(1) the feeling of bearing down and heaviness in the abdomen, and (2) frequency of micturition (pollakisuria) especially during the night. These symptoms which are commonly attributed to prolapse and pressure of tumors on the bladder are due most frequently to nervous functional disturbances, and not to the cystocele or the fibroid nodule pressing on the bladder, which may have been accidentally discovered in the same patient. This knowledge has been of greatest importance as it has necessarily changed our judgment and operative indications in many instances. It may be worth while to consider in

what way the purely nervous etiology of this symptom has been revealed by careful and unpremeditated clinical observation.

After having noticed for many years that occasionally patients continue to have symptoms of frequent micturition after having had an operation for prolapse, I saw a very impressive case in which the patient had been operated upon for an unusually large cystocele with a perfect anatomic result but was still complaining that the only trouble for which she had come to the clinic—frequent micturition, was entirely unchanged. Obviously, the prolapse was not the cause of the urinary disturbance. This case reminds me of certain experiences which we had at the beginning of x-ray treatment, when patients with uterine fibroids and frequent micturition due presumably to pressure of the enlarged uterus, often discontinued treatments after the first x-ray application because of the disappearance of their symptoms on the first day of treatment. It is also known that various symptoms feigning gastric ulcer have disappeared immediately following radioscopy with the patients amazed at their sudden and complete relief, not appearing to undergo an operation which had previously been considered.

All of these instances are well known to almost every physician who has seen a sufficient number of patients with symptoms that are obviously not caused by organic disease but are due to some nervous disturbance. In frequent micturition, a disturbance of the equilibrium must be considered which results in the hypertonicity of the sympathetic nerve controlling the function of the detrusor muscle of the bladder. In fact we have been able to demonstrate the presence of a hypertonicity of the sympathetic nerves by the method of *Eppinger* in a number of cases belonging to this group. In our empirical trials to reestablish the normal equilibrium of the vegetative nervous system we have found the administration of calcium in 40 per cent solution of calcium chloride, or calcium gluconate, superior to all other treatments. Frequent micturition occasionally disappears immediately following the intravenous injection of 10 c.c. of calcium chloride. The same amount may be repeated on one or two succeeding days. In addition the patient often feels at the same time a relief of other symptoms, such as backache and a feeling of heaviness and bearing down in the pelvis. This conception, based purely on clinical observation, has been supported very satisfactorily by exact experimental research of *Strauss* and *Rother* presented at the fifteenth meeting of the Deutsche Röntgen—Gesellschaft, which gives evidence that every x-ray application results in a decrease of

the tonus of the sympathetic nervous system and a simultaneous increase of the tonus of its opponent, the para-sympathetic system. They both lead to dilatation and relaxation, improvement of the blood supply and the release of various tonic contractions which may have caused uneasiness and pain. These researches may explain the immediate curative effect of the first x-ray application as well as the "mysterious cures" which have been observed following routine skiascopy.

THERAPY


The therapy most frequently advocated in the climacterium, compensation of the inefficient hormone production of the ovary by administration of ovarian tablets by mouth and of extracts by intra-muscular injection has not given the expected results. It is true that many failures can be avoided by an increase of the dosage and the use of more reliable preparations, although it must be admitted that there are patients in whom the climacteric symptoms can not be improved by simple substitution therapy. It may be expected that especially at the very beginning of the involution of the ovary the stimulation and reactivation of the ovarian function by thyroid gland tablets, and extracts of the anterior lobe of the hypophysis will give better results when the preparations contain standardized quantities of the hormones.

In many cases we must restrict ourselves to measures directed at the dominant symptom: in cases of hypertension vein puncture is used; in cases of pains the application of heat will bring relief. Hot flushes respond almost always to x-ray application to the hypophysis. The forementioned action of x-rays on the vegetative nervous system, may of course, not depend upon the location but merely upon the application of the x-rays. Finally administration of calcium is advisable in all patients with evidence of a nervous hyper-irritability.


CONCLUSIONS

The purpose of this paper has been to give an idea of the multiplicity of the climacteric symptoms which may arise from practically every organ of the body. Every physician, regardless of his specialty, may have to treat them and what is of more importance, may have to recognize them as manifestations of the climacterium. Furthermore, I have tried to draw your attention to a chapter of medicine which, although offering opportunities to start a most promising field of research, has not as yet been adequately acknowledged.

STATE HEALTH COMMISSIONER'S PAGE



Dr. Stulman, M.D.



Iowa experienced an average of 48 deaths from typhoid fever each year the past five years. This would indicate that 336 cases occurred each year in Iowa. The loss of time, the expense incidental to the illness and for the 48 funerals amounted to at least \$168,000. Add to this the future loss to the community, state and nation, which would average \$20,000 per adult death, making a grand total of over a million dollars loss a year. From this total loss, the physicians of Iowa receive only about \$30,000 for their services or \$10.00 each. (See cost of medical care.)

The seasonal prevalence of typhoid is in the summer and early fall. However, Iowa experiences typhoid every month—indicating the exist-

ence of many carriers and the necessity of prophylactic treatment in general practice.

Much of our typhoid may be termed "vacation typhoid"; i. e., the original case contracts the disease on vacation. The prevention becomes more necessary on account of the greater chance of exposure while touring.

There are 620,000 families of four each in Iowa. Probably one-tenth of these families spend two weeks each year on vacation. Therefore, 80 people from every physician's practice should be immunized against typhoid fever before starting on a vacation tour. This service alone would prove of great benefit to the welfare and well-being of our people in preventing typhoid and at the same time add materially to the income of the physician.

PREVALENCE OF DISEASE

DISEASE	Feb. 1932	Jan. 1932	Feb. 1931	Most Cases Reported From
Diphtheria	50	92	34	Pottawattamie, Woodbury
Scarlet Fever	223	227	554	Scott, Polk
Typhoid Fever	4	4	1	Humboldt
Smallpox	141	269	249	Pottawattamie, Woodbury
Measles	24	14	39	Cerro Gordo, Linn
Whooping Cough	97	108	33	Cerro Gordo, Black Hawk
Chickenpox	196	267	325	Washington, Black Hawk
Poliomyelitis	3	1	1	Johnson, Marshall, Taylor
Tuberculosis	28	26	24	Scott
Syphilis	137	179	98	Polk, Woodbury
Gonorrhea	211	253	95	Polk, Woodbury

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PUERPERAL FEVER

It has been said that Oliver Wendell Holmes was perhaps the most useful physician in America during the first half of the nineteenth century and that his greatest work was his unforgettable essay entitled "The Contagiousness of Puerperal Fever." It is true that Holmes was not the first observer to declare the contagiousness of puerperal fever, since White of Manchester, Kirkland of Leicestershire, and Gordon of Aberdeen, in the latter part of the eighteenth century had all made and recorded observations tending to suggest that puerperal fever was contagious or transmissible. In his first writings on this subject, Holmes wrote with conviction but with very little background of observation. He states, "The disease known as puerperal fever is so far contagious as to be frequently carried from patient to patient by physicians and nurses." Fortunately for science, Charles Delucena Meigs, Professor of Obstetrics at Jefferson Medical College, promptly took exception to Holmes' observations and statements and in no uncertain terms denounced Holmes as a dreamer. Upon the basis of a firm conviction and spurred by the criticism of Meigs, Holmes continued his observations and in 1883 brought out his memorable essay, which today stands as a masterpiece in the annals of medical writings.

Following Holmes came Semmelweis, to whom belongs the credit for the discovery of the infecting agent of puerperal fever, who, having been driven from Vienna by the obstetrical leaders of the time, met an untimely death and failed to see his work confirmed by Pasteur and Lister only a few years later.

Prior to these observations in the first half of the nineteenth century, motherhood was unsafe. Countless thousands died in childbed fever. There were hospital wards in which every parturient

woman stood no more than a one to ten chance of leaving the institution alive. Following the work of these pioneers, the mortality rate from puerperal fever dropped materially. In America today, we still maintain a mortality rate which is a disgrace to a civilized country. We stand in a position of some twelfth to fifteenth among the countries of the globe in this regard. Quoting a recent article by Paul de Kruif, thirty-eight out of one hundred mothers (dying during the child-bearing period) today die in childbirth. A statement published by the Maternity Center Association states that the total of American women's lives lost from this cause is sixteen thousand annually, ten thousand of whom could be saved by adequate care. In Iowa, for the year 1931 there are recorded one hundred seventy-eight deaths from the puerperal state and a death rate of 7.2; in 1930, there were two hundred fifty-eight deaths reported with a rate of 10.4 per one hundred thousand population. Is it surprising that a preventable cause of death which exacts such a heavy toll is at this time receiving considerable publicity from many sources?

In a recent issue of *The Ladies' Home Journal*, (March, 1932), Paul de Kruif, author of "Microbe Hunters," discussed the subject ably and pointed out that the correction of this evil lies in the hands of physicians, nurses and attendants of the puerperal woman. The publicity given the matter in *The Ladies' Home Journal*, while written in a popular way and in some instances with exaggeration, will do much toward creating a healthy and helpful interest in this condition.

The Maternity Center Association,¹ with headquarters in New York, is at this time circulating plans for a nation-wide Mother's Day campaign to obtain better maternity care for expectant mothers. A very definite part of this program will be the dissemination of information relative to puerperal sepsis, with suggestions as to preventive measures which will assist in reducing the mortality from this cause. In Iowa, the recently established Bureau of Maternity and Child Hygiene² as a component part of the Iowa State Department of Health will carry to Iowa mothers the message of the dangers from childbed fever. This bureau, with some \$19,350 available, should conduct a constructive program in Iowa which will do much toward reducing the deplorable death rate indicated by vital statistics as quoted above.

In a recent issue of the *Journal of the American Medical Association*,³ appears an editorial entitled "Saviors of Mothers." This editorial dealing solely with the de Kruif article in *The Ladies' Home Journal*, is written in defense of the medical profession. It points out the fallacies and exaggerations

generations appearing in de Kruif's article. As a defense article, it is commended, but the truth remains that in many instances puerperal fever is transmitted from one patient to another due to the carelessness of the physician or nurse in making the daily rounds. Would it not be a more constructive program if we would assume the responsibility, or at least a portion of it, and upon this basis join hands with other forces in a campaign of disseminating information relative to the cause of this disease and precautions necessary for its prevention and thus make our contribution to the campaign of making motherhood safe? At one point in the A. M. A. editorial, the writer states, "At this time obstetrical care in the United States for the vast majority of women is as good as—if not better than—in the majority of civilized countries."

It is difficult for the writer to reconcile this statement to our mortality statistics. If this statement is true, why then should we be outranked by some ten or twelve other countries? We agree that the medical profession should not be made the scapegoat for the promotion of any campaign of this sort. But, on the other hand, we must accept the responsibility which lies with us and meet this responsibility squarely. Cooperation with the agencies established for the furtherance of this program of prevention is certainly the part of every physician and every citizen. In Iowa, it is particularly important if we would accomplish this end that we maintain a very active interest in the Bureau of Maternity and Child Hygiene. May we keep before us the vision of motherhood revealed by Oliver Wendell Holmes.

"The woman about to become a mother, or with new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation, when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by machinery as sure as destiny, is arrested in its fall at the word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at this eventful period, should hazard it negligently, unadvisedly, or selfishly."

IOWA PEDIATRICIANS ACTIVE IN PROMOTING CHILD WELFARE

An inventory of the national and local movements interested in child welfare reveals an activity which presages important advances in the future outlook for the health program of the children of America.

The Washington conference, under the leadership of President Hoover and Dr. Ray Lyman Wilbur, engaged hundreds of the nation's most able minds in an extensive statistic-gathering investigation of factors relating to child health and protection.

This work has been reflected in preliminary reports from various divisions of the White House Conference which have been reviewed in recent numbers of this JOURNAL.

To facilitate the carrying on of the good work accomplished by the national conference the pediatricians of the country organized and held the first meeting of the American Academy of Pediatrics at Atlantic City in May, 1931. To Isaac A. Abt of Chicago was given the honor of being the academy's first president. Dr. John L. Morse of Boston will preside at the society's second meeting to be held in New Orleans on May 13th and 14th. The academy was composed of nearly 400 charter members and expects to expand to an organization of 1,200 to 1,400. *The Journal of Pediatrics* will be the official publication of the academy, and the first issue will appear in July, 1932. Dr. Borden S. Veeder and Dr. Hugh McCulloch of St. Louis are the editors, and the C. V. Mosby Company of St. Louis the publishers.

In our own state, Governor Turner created the Iowa White House Conference on Child Health and Protection, naming D. C. Steelsmith, M.D., state health commissioner, as chairman. The conference was divided into four sections and chairmen appointed: Medical Service, Dr. Fred Moore; Public Health Service, Dr. M. E. Barnes of Iowa City and Dr. J. F. Edwards, Ames; Education and Training, Agnes Samuelson, and George D. Stoddard; Handicapped Children, Dr. Mae Habenicht. Extensive committee appointments were made under the chairmen listed above, and these committees have spent months obtaining a cross section of conditions as they exist in Iowa. The results of the investigations of the conference will be presented at a meeting of the whole to be held April 14 and 15, 1932, at Hotel Fort Des Moines, Des Moines, Iowa. An extremely interesting and educational program for the two day session has been arranged under the direction of Dr. Fred Moore, program chairman. The significance of this conference is apparent by the fact that the following nationally known men have seen

1. The Maternity Center Association, 1 East 57th Street, N. Y. C.

2. Announcement in Journ. Ia. State Med. Soc. Jan., 1932, p. 38.

3. J. A. M. A., March 12, 1932

fit to accept invitations to appear on the program: E. H. Cary, M.D., president-elect of the American Medical Association; S. J. Crumbine, M.D., of New York, executive secretary of the American Child Health Association; F. N. Freeman, Professor of Education, University of Chicago.

Three years ago the pediatricians of Iowa organized the Iowa Pediatric Club. A scientific session held in the fall at Iowa City and a social and business session in the spring at the time and place of the state medical meeting has constituted the formal activities of the club.

The following Iowa physicians compose the membership of the club: Lee F. Hill, Des Moines, President; J. D. Boyd, Iowa City, Secretary; L. M. Downing, Cedar Rapids; James Dunn, Davenport; J. E. Dyson, Des Moines; M. L. Floyd, Iowa City; Morgan J. Foster, Cedar Rapids; J. T. Gerken, Waterloo; J. M. Hayek, Cedar Rapids; R. O. Hughes, Ottumwa; Phillip C. Jeans, Iowa City; Dennis H. Kelly, Des Moines; J. C. McKitterick, Burlington; R. H. McBride, Sioux City; Fred Moore, Des Moines; Martin D. Ott, Davenport; Roland Stahr, Fort Dodge; Arnold M. Smythe, Des Moines. This group has served as the committee for the medical service section of the Iowa conference.

In this summary of activities devoted to children, attention should be called to the Friday morning session of the state society program printed elsewhere in this issue. At the last annual meeting of the state society a committee was appointed on child health and protection. Since much of the work of the members of the state society is in the field of pediatrics, the program committee deemed it advisable that more of the program should be devoted in a practical manner to pediatrics and allied subjects. The prospects for repetition of this arrangement will probably depend in a large measure upon the way in which this program is received by the members of the society. If one were to pass judgment in advance it would be favorable since a very practical program is offered by very capable men. This same committee has been influential in the Iowa White House Conference on child health and protection and appears to have related the pediatric program in some measure to the medical service section of these conferences. We note that this particular program is to be initiated at Sioux City by a brief discussion of the medical section of the Iowa conference, and that it will be concluded by none other than the inimitable Dr. Carlson, Professor of Physiology at the University of Chicago. He will interpret the doctor's responsibility in child health and protection. Dr. A. J. Carlson needs no introduction to the medical profession of Iowa.

DANGEROUS DOLLARS—THE EVIL INFLUENCE OF EXORBITANT FEE CHARGERS

EDITOR'S NOTE.—*The accompanying editorial taken from the March issue of CALIFORNIA AND WESTERN MEDICINE is presented without comment, save that the physician referred to in this article is a practitioner in the Middle West. We do not possess the physician's name and for this reason are unable to verify the statement that he is a member in good standing of his state society. The attached article is entitled, "Dangerous Dollars—The Evil Influence of Exorbitant Fee Chargers."*

A Former Editorial on This Subject—In an editorial printed in the January, 1926, number of *California and Western Medicine*, the late William E. Musgrave, former editor, under the caption "\$ \$ Dangerous Dollars \$ \$," discussed some of the evil effects which result to the prestige of the entire non-sectarian medical profession, through exorbitant charges by a comparatively small number of members of the profession.

* * *

An Experience With a Mid-West Charger.—When the other day the present editor received a copy of an itemized statement, for services rendered by a physician in a moderate sized city in a mid-west state, to an elderly patient to whom he had been called to give treatment for a fractured neck of the femur, the editorial above referred to was recalled.

The bill of the mid-west physician was sent to the Los Angeles representative of the estate of the patient, and because of the seeming size (the entire estate of the deceased patient amounting to about ten thousand dollars), this heir, through an attorney, sent the statement to one of the officers of the Los Angeles County Medical Association with request for an opinion thereon. It has been stated to us that "the attorney made the statement that the bill seemed excessive to him. He had made the proposition to the mid-west attending doctor that the bill be presented to any three men selected by the officer from the Los Angeles County Medical Association, but the mid-west doctor refused this mode of adjustment."

Why This Specific Case Is Referred To.—This information is here given because in a discussion of professional charges it seems wiser to use as a basis for comment, concrete instances rather than generalized or abstract statements. There may be some who would hold that matters such as these should be taken up only in executive session. In theory such a plan may be good, but in practice it has been found to lead to nowhere.

It is generally admitted that exorbitant fee charging by some members of the medical and

dental professions is a something that is nowadays met with, considerably more often than was the case one or two decades ago. The question really comes up as to whether or not one of the reasons for the existence of the present-day larger number of exorbitant fee chargers is not due to the fact that the subject is so nasty and so personal that most physicians desire to remain aloof from official action or contact therewith, even though in discussions with one another they roundly condemn the exorbitant fee chargers who besmirch the profession. When, however, it is realized that the small group of exorbitant fee chargers, more than almost any other factor, have in recent years destroyed much of the reputation formerly possessed by the medical profession for humanitarian and honorable dealing, it naturally follows that aloofness or non-discussion of deplorable exorbitant fee facts will only make matters worse, instead of better.

It is the viewpoint of many physicians that this small number of exorbitant fee chargers who are scattered through the profession have in recent years brought more disgrace to a noble guild than did the shysters or out-and-out quacks of days gone by, who in that time were supposed to be part of us.

These modern day exorbitant fee chargers conceal their basely commercialistic motives when they apply for membership in our medical organizations; and once in, are usually most unctuous in their personal relationships with colleagues. Thus they use their high pressure salesmanship methods, not only to mulct their patients of money out of proportion to services actually rendered (as based on service charges of fellow practitioners of equal capacity) but they seduce their fellow practitioners into thinking that their characters are far different and more honorable than is actually the case.

If their misdeeds in the way of extortion reacted only upon themselves, then the profession would have little need to give them further thought. Unfortunately, however, every outrageous example of exorbitant fee charging is passed from lay person to lay person, until even well and kindly thinking members of the lay public are tempted to believe that nearly all members of the medical profession suffer from the same grasping dollar taint; except that some of the profession are more daring than others in the nefarious game. And because the stories of their excessive fees become a topic of general lay and professional conversation, these extortion specialists become powerful agents in seducing recent graduates from the profession's traditions of efficient service at decent compensation, to embark on careers of practice in

which the sordidness of base monetary acquisitiveness becomes paramount to the doctrine of real service.

* * *

The Concrete Mid-West Case.—Let us go back to the itemized statement of the mid-west physician, a young doctor out of college only some five years or so, who is in general practice and is not an orthopedic or surgeon specialist, and who sent to an elderly woman with a fractured femur (having total means amounting to about ten thousand dollars), a statement for professional services amounting to \$4,900; and who, when requested to modify this bill, as above indicated, refuses to do so. The copy of the statement which we have been given, with deletions of identifying place, is as follows:

October 15, 1930.

To the Estate of.....	
The.....National Bank of.....	
City, Executor.	
February 2, 1930—Physical examination, diagnosis, application of splint, etc.	\$ 250.00
February 3, 1930—Operation, reduction of fracture, application of body cast, etc.	1,500.00
February 3 to April 15, 1930—145 hospital visits, including treatment of fracture and intravenous injection for chronic arthritis, and treatment of ulcers at \$10 per visit (Editor's Note—A period of 70 days).....	1,450.00
March 10, 1930—Operation, removal of cast, re-application of bivalved cast, curettement of ulcers and treatment of ulcers	850.00
April 15 to May 4, 1930—Forty home visits, including treatment of fracture, intravenous injections for arthritis, treatment of ulcers at \$15....	600.00
May 4, 1930—Night house visit, five hours' detention with patient, injection of stimulants, artificial respiration, etc., attempting to save patient from death, at \$50 per hour.....	250.00
Total for professional services rendered	\$4,900.00
<hr/>	
Paid on account 2/9/30, \$85; 2/17/30, \$35; 2/25, \$35; 3/1, \$35; 3/8, \$35; 3/15, \$35; 3/22, \$35; 3/29, \$15.	
Total paid on account.....	310.00
<hr/>	
Amount due.....	\$4,590.00

Readers of *California and Western Medicine* can come to their own conclusions as to the justice

of charges such as the above; and can estimate for themselves the effect which publicity of such charges will have in that particular community, in forming lay opinions of the local medical profession's standards of fair dealing.—*Reprinted from California and Western Medicine by permission.*

IOWA STATE MEDICAL LIBRARY

From time to time we wish to call attention, editorially, to the Iowa State Medical Library, located in Des Moines, which has been established and maintained for the benefit of physicians throughout the state. It is apparent that many physicians fail to appreciate that we have so rich a storehouse of medical literature immediately available within the state.

This Medical Library, now composed of 15,200 volumes, is a part of the Iowa State Library housed in the Historical Building in Des Moines, and is efficiently operated by a graduate physician thoroughly familiar with medical literature. Augmenting the facilities offered by the bound volumes, the library has thousands of pamphlets and magazines. Limited funds are available for the purchase of new volumes, which, because of their judicious handling, have proved sufficient to keep the library files up to date and well stocked with current journals. Complete sets of the Index Medicus, the Culminative Index of the American Medical Association, and the Surgeon-General's Index, are available. The librarian will attempt to cooperate with any physician in the state in securing information upon a particular subject in which he is interested. Where books are desired that are unavailable in this library, the librarian will secure from other sources the desired volume and transmit it to you. From the generous number of abstracts on hand, the librarian can furnish frequently the translation or abstract of foreign articles. Physicians wishing to read current medical journals to which they are not subscribers may secure these current journals from the State Medical Library.

Some physicians have been deterred from using the library in a generous fashion due to the fact that they anticipated that such an elaborate service would necessarily be an expensive one. The surprise of this excellent service is the cost. The physician may obtain any volume he wishes from the library upon payment only of the transportation costs involved. He may receive the journals, abstracts or bibliographies referred to at no cost other than the actual postage required.

The librarian wishes to serve just as many physicians as possible, and to those who have availed themselves of this opportunity the service needs

no recommendation. To those who are unfamiliar with the service, we would urge that you become acquainted with the librarian and the library.

An appeal has just reached us from the library for back numbers of the "JOURNAL OF THE IOWA STATE MEDICAL SOCIETY," as well as other medical journals. Doctor Throckmorton states that she will be very glad indeed to refund postage or transportation charges on all JOURNALS furnished to her. She writes: "There are over one hundred medical libraries in the National Association, and only part of them have the Iowa JOURNAL on their shelves. I feel that it compares well with other state medical journals, and my ambition is to start a file in as many libraries as possible and complete missing numbers in larger libraries. These libraries, in turn, will help me fill my missing journals."

Since money seems scarce, we must plan to keep efficient by various ways of replenishing our medical literature. Physicians who have medical journals—bound or unbound—and who no longer wish to maintain them in their own libraries will render a real service to Iowa medicine by donating this literature to the state library. Address your communications to Dr. Jeannette Dean Throckmorton, Iowa State Medical Library, Historical Building, Des Moines, Iowa.

IOWA WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION

A hundred members of the Iowa State Medical Society have been working on committees of the medical and public health sections of the Iowa White House Conference which will convene at the Hotel Fort Des Moines on April 14 and 15. This conference is a direct outgrowth of the National White House Conference and, like that, is organized in four major divisions. In addition to the medical sections just referred to, there is a section on education and training and one which will deal with handicapped children. Many committees of these several sections have been working for months gathering facts pertaining to the childhood of Iowa. These studies will be presented as committee reports at this meeting. These reports will constitute the sectional programs and will be presented simultaneously.

Speakers of national reputation have been engaged to come as guests of the conference and give inspiration and guidance to the deliberations of the meetings. These guests will be presented in general sessions of the whole conference. Medical men will be especially interested in Dr. E. H. Cary, president-elect of the American Medical Association, of Dallas, Texas, and Dr. S. J. Crumbine, general executive of the American Child Health

Association, of New York. Doctor Crumbine will address the opening session on Thursday morning. Doctor Cary will address a dinner meeting on Thursday evening. He will discuss Child Health and Protection from the Doctor's Point of View. At the same meeting the educators will present, as guest speaker, Frank N. Freeman, Professor of Education at the University of Chicago. Professor Freeman will discuss Education in Relation to Child Health and Protection.

This conference is to be informative and inspirational. Governor Turner has issued invitations to all local organizations interested in child health to send official delegates. The meeting, however, is open to the public. There will be no charge for registration. A unique feature of the conference is the offering of "The Last Mile," by the Kendall Community Players. Guest tickets will be offered to those who register for the conference. "The Last Mile" is a play with unusual sociologic implications which portrays very vividly some of the results of failures in child health and protection.

At the last meeting of the state society a committee on child health and protection was appointed in order that the society might have official representatives to work with just such organizations as this has proved to be. Judging from the promised medical participation in this coming meeting it appears that the committee is successful in securing sound medical guidance for this occasion of state-wide interest. It is hoped that many members of our society may find it possible to attend this meeting.

THE NEW ORLEANS SESSION

The Eighty-Third Annual Session of the American Medical Association is to be held in New Orleans from May 9 to 12, 1932. All indications point to a good attendance and a good program. There have been many applications for places on the scientific program and the officers of the session have been working earnestly to arrange their respective programs so that they will be fully up to the high standards heretofore established. Practically all of the space available for scientific exhibits has already been assigned and the committee on scientific exhibits has been compelled to refuse a number of applicants. The technical exhibits promise to be large and will include many exhibits of materials used by physicians. The clinical lecture program will be given on Monday afternoon, May 9, and on Tuesday morning and afternoon, May 10, at the Municipal Auditorium. Topics to be discussed are of important and practical interest to the rank and file of the profession and the

contributors to this program are well known and highly qualified in their respective fields of work. The opening general meeting, at which Dr. E. H. Cary will be installed as president, will be at the Auditorium on Tuesday evening, May 10. The President's Reception will be on Thursday evening, May 12. The meeting of the scientific section will begin on Wednesday morning, May 11, and will continue through Friday, May 13. The House of Delegates will convene for its first meeting at 10 A. M., Monday. The meetings of the Women's Auxiliary will be held at the Hotel Bienville. Those who expect to attend the New Orleans session and have not made their hotel reservations should do so at once.

THE THOMAS W. SALMON MEMORIAL LECTURES

The Thomas W. Salmon Memorial Lectures will be given at the Academy of Medicine in New York City beginning April 8, and continuing on April 15 and 22. The lecturer will be Dr. Adolf Meyer of Baltimore, who was chosen by the committee in charge of the lectures in recognition of his services to American psychiatry and his eminence as a scientist and teacher in this branch of medicine.

The Thomas W. Salmon Memorial Lectures were established in honor of the late Dr. Thomas W. Salmon, Professor of Psychiatry of Columbia University and the first medical director of the National Committee for Mental Hygiene. Dr. Salmon was a leader in mental medicine and did more in his day to advance the care and treatment of the mentally ill in this country than perhaps any other one professional man.

Shortly after his death his friends and associates formed the Thomas W. Salmon Memorial Committee, which raised an endowment fund of \$100,000 as a permanent memorial in his honor for the advancement of psychiatry and mental hygiene, and each year an outstanding worker in these or related fields will be selected to give the Salmon lectures, which form the main activity of the memorial. The lectures will be given in various cities in different years under the auspices of accredited scientific, medical or educational organizations. The New York Academy of Medicine administers the fund and the lectures.

The Thomas W. Salmon Memorial Lectures are the first of their kind to be established in the history of American medicine and have been called "the Noble Prize of American Psychiatry." It is the purpose of the lectureship to stimulate and encourage original research and study in mental hygiene and psychiatry and to honor in this way those who are making outstanding contributions to scientific advancement in these fields, in this country or abroad.

Iowa physicians visiting New York on any or all of these dates are invited by the New York Academy of Medicine to attend these lectures.

SPEAKERS BUREAU ACTIVITIES

SYMPOSIUM ON ENDOCRINOLOGY

At the request of the Upper Des Moines Medical Society, the Speakers Bureau is arranging a series of ten weekly programs—a symposium on diseases of metabolism and endocrinology. In addition to the members of Dickinson, Emmet, Clay and Palo Alto counties, the members of the adjoining counties have been invited to attend these meetings. The following subjects are to be discussed:

1. Anatomy and Physiology of the Endocrines.
2. Diseases of the Pituitary and the Parathyroid.
Diseases of the Spleen.
3. Physiology and Diseases of the Thyroid.
Surgical Management of the Thyroid.
4. Gonads—
Female.
Male.
5. Heredity and Disease.
Obesity.
6. Diabetes Mellitus.
Vitamins.
7. Physiology and Histopathology of the Blood.
Laboratory Blood Technic.
8. Leukemias.
Pernicious Anemias.
9. Anemias in Children.
Secondary Anemias in Adults.
10. Allergy—
General Considerations.
Hay Fever.
Vasomotor Rhinitis.
Asthma.
Eczema.

Men from the University of Iowa, the University of Nebraska, the University of Minnesota, the Mayo Clinic and doctors from different parts of Iowa have been invited to take part in this symposium. These programs are to begin on Tuesday, April 12, and continue each succeeding Tuesday with the exception of Tuesday, May 3 (the first day of the annual session), for a period of ten weeks. Half of the meetings will be held at Spencer and the other five at Emmetsburg. The programs will be divided into two periods, one beginning at five o'clock and the other immediately following dinner.

CHEST CLINICS

The heart and lung clinics which are sponsored and financed by the Iowa Tuberculosis Association and offered to county medical societies as a program for a regular meeting of the society are limited in number this year. Most of the available dates have already been selected, so any county medical society desiring one of these clinics this year should direct its secretary or president to send in a request to the Speakers Bureau at once.

RADIO BROADCASTS

With the radio talk on Hay Fever, the second series of radio talks given by members of the Iowa State Medical Society has been successfully concluded.

The next series of medical broadcasts under the direction of the Speakers Bureau is a marked innovation and will consist of six acts of a serial radio drama. They will begin the first Tuesday in April and continue for a period of six weeks. This series of talks is to be prepared by the Bureau of Maternity and Infant Hygiene of the State Department of Health. The title of the series is "Along the Pathway to Parenthood." The theme is that of maternal welfare and the talks will be very appropriately concluded about the time of Mother's Day.

Both the Speakers Bureau and the Bureau of Maternity and Infant Hygiene are very anxious to have the reaction of the members of the Iowa State Medical Society in regard to this new series of broadcasts. This is an idea which has been carried out in no other place in the United States, and, if successful, may serve as a model for similar broadcasts in other states. These talks may be heard at 1:00 P. M. on Thursdays over station WOI at Ames and at 8:00 P. M. over station WSUI at Iowa City.

DISTRICT MEETINGS

One of the strong arguments in favor of the formation of new districts at the time of the annual session last year was the fact that the solidarity of the new districts would make possible regular district society meetings for the purpose of scientific programs and business sessions. Business meetings were held in ten of the eleven councilor districts last fall and so far this year four of the councilors have organized meetings in their districts and two additional districts have meetings scheduled for some time in April.

In the second and in the sixth districts combined business and scientific meetings were held; business sessions only were held in districts ten and eleven. Both the first and fifth districts are planning business and scientific programs for next month. The Speakers Bureau has helped with the arrangements for both scientific programs which have been held and officers of the state society have been invited to attend every meeting.

All of the districts have expressed opinions favorable to regular district meetings, both for the purpose of having high grade scientific programs and for the dissemination of information regarding state society activities and problems and for the discussion of local problems. These district meetings should prove a vital factor in the continued growth of harmony and solidarity among the members of the medical profession in Iowa.

To All Officers and Delegates

A call is hereby issued for a meeting of the House of Delegates of the Iowa State Medical Society.

The meeting will begin promptly at 1:30 P. M., Tuesday, May 3, in Room 2 of the Masonic Temple in Sioux City.

The gathering is called a day before the annual session on account of the large amount of business that confronts this session of the House. Furthermore, we believe the scientific program to be exceptionally good and do not like to have the delegates forced to miss any part of it.

It is desired that the officers and delegates make a special effort to attend these meetings, for many matters of consequence to the individual members, as well as the county and state societies, will be discussed. Should any delegate be unable to come, will he see to it that his alternate is in attendance? Delegates and alternates may be elected at any meeting in advance of the annual session, and their names must be certified by the president and secretary of the county society, to the secretary of the state society.


If a delegate or officer contemplates introducing a motion or resolution will he have a typewritten copy prepared for the use of the presiding officer?

All the meetings of the House of Delegates are open to the members of the society. Naturally, only those qualified may take part in the proceedings.

I want this House of Delegates to meet without malice, and to proceed without fear or favor to do the things that are for the good of the Iowa State Medical Society.

As in recent years, a handbook for members of the House will be distributed prior to the meeting and will contain the annual reports of the officers, official boards and committees. The delegates are urged to give careful study to these reports and to refer to their county societies for advice or action those problems which in their opinion require such consideration.

Registrations for admission to the House of Delegates should be made prior to the opening hour and the registration desk, located at the north entrance to the Masonic Temple, will be open at 12:00 noon. Registration is necessary since it will serve the purpose of both certification and roll call.


President.

SOCIETY PROCEEDINGS

Buchanan County

Wednesday, March 16, the members of the Buchanan County Medical Society met for a dinner meeting in Independence, for the purpose of discussing the question of caring for the indigent sick of the county. After an evening's discussion, Drs. H. A. Householder of Winthrop and B. B. Sells of Independence were named as a committee to meet with the board of supervisors and work out a satisfactory method of handling this type of medical service.

Butler County

A special meeting of the Butler County Medical Society was called and held Thursday, March 24, at Dr. Kepler's office in Allison, to elect a new secretary of the society. Dr. H. G. MacLeod of Greene was selected for the office. Delegates for the state meeting were also named as follows: Dr. Bruce Ensley of Shell Rock, and Dr. J. G. Evans of Hartford.

Calhoun County

C. W. M. Poynter, M.D., dean of the University of Nebraska College of Medicine, addressed the Calhoun County Medical Society, Thursday, March 17, on the subject of Peritoneal Absorption, as shown by animal experiments. His former pupil and co-worker in these experiments, Dr. L. L. Davidson, now located at Lake City and president of this society, then gave a resumé of his findings in relation to bacterial absorption. Both talks were illustrated with lantern slides. At the dinner preceding the meeting, Dr. William W. Pearson of Des Moines, councilor of the fifth district, was present and gave an intimate and extremely interesting discussion of the workings of organized medicine as represented by this group. Guests included physicians from Sac, Webster and Carroll counties.

P. W. Van Metre, M.D., Secretary.

Cerro Gordo County

The regular meeting of the Cerro Gordo County Medical Society was held at the Y. W. C. A. in Mason City, Tuesday, March 15. Wives of the physicians attended the 6:30 dinner, after which Dr. L. R. Woodward, chairman of the council, discussed the reasons for organizing a woman's auxiliary to the county society. Following this, the women retired for their own meeting, and O. H. Plant, M.D., professor of pharmacology at the State University of Iowa, showed a motion picture of experiments on the effect of certain drugs on the heart. The pictures and Dr. Plant's lecture constituted a very interesting and instructive entertainment.

T. E. Davidson, M.D., Secretary.

Dubuque County

J. Carl Painter, M.D., of Dubuque presented the scientific program for the Dubuque County Medical Society when that organization met in Dubuque, Wednesday, March 9. Dr. Painter spoke on "The Treatment of Pulmonary Tuberculosis Today."

Greene County

Thursday, February 25, the Greene County Medical Society met at the Hotel Lincoln in Jefferson for a dinner meeting, and the following program was presented: "Tetanus," with case report, Roy E. Parry, M.D., of Scranton; "Diagnosis," George W. Franklin, M.D., of Jefferson, and "Tetanus Antitoxin," F. P. Cartwright, M.D., of Grand Junction.

John R. Black, M.D., Secretary.

Hardin County

The bi-monthly meeting of the Hardin County Medical Society was held at Eldora, Monday, March 28. Dinner at the Hotel Winchester was followed by an address on "Electrocoagulation of Tonsils," by F. L. Wahrer, M.D., of Marshalltown.

W. E. Marsh, M.D., Secretary.

Ida County

The Ida County Medical Society met in Ida Grove, Friday, March 18, and the program consisted of a paper on "The Injection Treatment of Varicose Veins and Hemorrhoids," by W. P. Crane, M.D., of Holstein, which was very interesting and instructive, and two moving pictures on medical subjects presented through the courtesy of the Petrolagar Laboratories, by Mr. O. W. Knott of Des Moines.

Paul H. Jordan, M.D., Secretary.

Jasper County

Frank D. Jacobs, M.D., of Kellogg, furnished the program for the dinner meeting of the Jasper County Medical Society, Tuesday, March 1, speaking on "Aggranulocytic Angina."

Linn County

Thursday, March 10, the regular meeting of the Linn County Medical Society was held at the Hotel Roosevelt in Cedar Rapids, with Arthur Steindler, M.D., professor of orthopedic surgery, State University of Iowa, as the principal speaker. Dr. Steindler talked on "Injuries to the Knee Joint," and his paper was discussed by Peter A. Bendixen, M.D., of Davenport; H. E. Pfeiffer, M.D., of Cedar Rapids, and C. S. Krause, M.D., also of Cedar Rapids. A paper was also presented by Howard L. Van Winkle, M.D., of Cedar Rapids, on "Blood Transfusions."

Marion County Meetings

A called meeting of the Marion County Medical Society was held in Knoxville, Tuesday, March 8, with the members of the dental profession as guests. A clinic was conducted, the material for the same being the male Siamese Twins, Lucio and Simplicio Godino. A great deal of scientific knowledge as well as interesting entertainment was obtained from this clinic.

The evening of March 29, a dinner was held at the Boylan Cafe in Knoxville, followed by an informal meeting at Memorial Hall, where various medical economic problems were discussed.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held Monday, March 28, at the Fort Des Moines Hotel. The scientific session was opened by Edwin B. Winnett, M.D., who read a paper on "The Complications of Diabetes Mellitus," which contained a detailed study of diabetes mellitus in Iowa. Albert Kuntz, M.D., professor of anatomy at St. Louis University School of Medicine, lectured on the subject of "Visceral Sensitivity and Referred Pains." This paper was discussed by Drs. Bierring and Abbott, who praised the author for his work in this field and thanked him for presenting the material before the society. Robert L. Parker, M.D., secretary of the state society, was called upon to present information concerning activities of the state society. Dr. Parker delivered a brief and concise report with the aid of a chart of activities and cost figures. Dr. F. L. Rector, representing the American Society for the Control of Cancer, was present and spoke briefly of the cancer survey which he is conducting in Iowa at the present time. Following the meeting a light buffet luncheon was served and the evening was devoted to conversation and cards. An attendance of 123 members and guests marked the meeting as one of the best attended in recent years.

L. K. Meredith, M.D., Secretary.

Story County Annual Meeting

Dr. E. B. Bush of Ames was elected president of the Story County Medical Society at the annual meeting held in Ames, Thursday, February 25. Dr. J. F. Morse of Nevada was chosen vice president, and Dr. B. G. Dyer of Ames was elected secretary for the fourteenth consecutive time. Dr. Bush was also named delegate and Dr. Bush Houston of Nevada, alternate delegate.

Tama County

Nathaniel G. Alcock, M.D., of Iowa City, was the speaker of the evening at the Tama County Medical Society meeting held at Toledo, Friday, March 11. Dr. Alcock presented a paper on "Transurethral Prostatic Resection."

Woodbury County

The regular meeting of the Woodbury County Medical Society was held Thursday, March 24, at the Martin Hotel Ballroom in Sioux City. A 6:30

dinner was followed by a program consisting of: "Poliomyelitis," Robert D. Knott, M.D.; "Discussion of State Society Problems," Vernon D. Blank, managing director of the state society, and "Discussion of State Dues and Finances," Robert L. Parker, M.D., secretary of the state society.

Tri-County Medical Society

The Tri-County Medical Society composed of physicians from Washington, Henry and Jefferson counties held its February meeting at the Harlan Hotel in Mt. Pleasant, Tuesday, February 25. Doctors from Des Moines, Van Buren and Lee counties were also present as invited guests. Dinner was served at 6:30 and the following program presented: "Fractures," Peter A. Bendixen, M.D., of Davenport, and "Traumatotherapy, Its Relation to Workmen's Compensation," H. A. Keatley, M.D., Rock Island, Illinois.

DISTRICT MEETINGS

Sixth District Meeting

Members of the sixth district met at the Hotel Tallcorn in Marshalltown the afternoon and evening of March 23 for a combined business and scientific session. The business session opened at 4 p. m. with Councilor W. L. Hearst presiding. President Channing G. Smith discussed the activities of the state society and Secretary Robert L. Parker presented the financial problems connected therewith. The discussion which followed covered various phases of local and state medical economic activities, but centered about the care of the indigent sick, both at the University Hospital and by local physicians. The plan of a county contract between the medical society and the supervisors was given much attention, five counties (Benton, Black Hawk, Hardin, Marshall and Tama) having lump sum contracts and one (Powe-shiek) having a fee schedule contract, with one other county (Jasper) having a lump sum contract under consideration.

Following a 6:30 dinner, President Smith introduced the speaker of the evening, Dr. Arthur Abt, of Chicago, who presented motion pictures and a discussion of "Injuries to the Newborn."

Every county was represented at the business session and some fifty members were present. Seventy-five attended the evening program.

Tenth District Meeting

At 6:30 p. m. on Tuesday, March 29, the members of the tenth district convened at the Iowana Hotel in Creston for a business meeting. Councilor James G. Macrae presided and the program was devoted to a discussion of medical economics and local and state society affairs. Secretary Robert L. Parker discussed "Problems before the House of Delegates." Trustee E. M. Myers, of Boone, spoke upon "State Society Finances from the Viewpoint of the Trustees," and Managing Director Vernon D. Blank discussed "Political Reports and Suggestions." President elect B. L. Eiker, being present, was introduced

as candidate for Republican nominee for the state senate from the district composed of Decatur, Ringgold and Union counties.

The attendance was good, all but two counties in the district being represented.

Eleventh District Meeting

County officers and members of the eleventh district met for an exclusive business session at the Hotel Chieftain in Council Bluffs at a dinner meeting on March 10. Delegates and other officers of every county in the district were present, with a total attendance of seventy-five.

In the absence of Councilor A. V. Hennessy, Dr. F. E. Bellinger, deputy councilor of Pottawattamie County, presided, and as the first number on the program read a paper by Dr. A. V. Hennessy, which set forth the necessity for close and active medical organization. Dr. Bellinger then introduced President Channing G. Smith, who discussed the scientific and economic features of the coming annual session and also outlined the advantages of district medical societies. Secretary Robert L. Parker spoke upon the functions and costs of the state medical society, and Managing Director Vernon D. Blank discussed political conditions as affecting the medical profession of the eleventh district.

The formal discussions were followed by a lively discussion which was opened by Dr. V. L. Treynor, of Council Bluffs, and in which a considerable number of those present took part. Officers from each county were called upon to describe local conditions and their interests in medical and economic activities. At the conclusion of the discussion the following resolution was unanimously adopted:

That it be the sense of this meeting that we approve the present activities of the Iowa State Medical Society, and if possible to have the dues continued at \$12.

AUXILIARY NEWS

Preliminary program of the Women's Auxiliary to the Americal Medical Association

New Orleans, May 9-13, 1932

Monday, May 9, 1932

6:00 P.M. National Board Dinner and Pre-Convention Meeting (for Board Members only)
.....Orleans Club, 5005 St. Charles Ave.

Tuesday, May 10, 1932

9:00 A.M. General Meeting.....Jerusalem Temple
MRS. ARTHUR B. MCGLOTHLAN, *presiding*
12:30 P.M. Buffet Luncheon.....Jerusalem Temple
2:00 P.M. Walk through Vieux Carre, with guides
—Starting from the Patio Royale
4:00 P.M. TeaPatio Royale
8:00 P.M. General Meeting of the American Medical AssociationAuditorium

Wednesday, May 11, 1932

9:00 A.M. General Meeting.....Jerusalem Temple
MRS. ARTHUR B. MCGLOTHLAN, *presiding*
12:30 P.M. Auxiliary Luncheon.....
.....Southern Yacht Club

2:30 P.M. Post-Convention Board Meeting
.....Southern Yacht Club
2:30 P.M. Through Garden Gates; Glimpses of
New Orleans
4:00 P.M. Teas in Private Residences

New Orleans Country Club

8:30 P.M. Divertissements in the Garden
10:00 P.M. Buffet Supper
Negro Spirituals.....
Courtesy of the Women's Auxiliary to
the Louisiana State Medical Society
Thursday, May 12, 1932

9:00 A.M. General Meeting.....Jerusalem Temple
MRS. WALTER JACKSON FREEMAN, *presiding*

10:00 to 10:50

11:00 to 11:50 Special Round Table Conferences
.....Jerusalem Temple

12:00 noon Buffet Luncheon.....Jerusalem Temple
1:00 P.M. Trip to Oak Valley Plantation; visiting
Spillway. Returning at 6 P.M.

or

2:00 P.M. Round-trip over Lake Pontchartrain, via
New Bridges

or

2:30 P.M. Trip to Versailles Plantation, Battle Field
of New Orleans; Docks and Wharves

or

2:30 P.M. Delgado Museum and City Park; New-
comb Art School and Audubon Park

or

2:30 P.M. Mayan Exhibit.....Tulane University

9:00 P.M. President's Reception and Ball
.....Auditorium

Friday, May 13, 1932

9:00 A.M. Trip to Gulf Coast—Leaving L. & N.
station at 9 A.M., returning to New
Orleans at 6 P.M.

10:00 A.M. Golf Tournament.....Metairie Golf Club

INTERESTING NEWS

In Brief

The Supreme Court has recently ruled that the legislature acted within its authority in enacting a law providing that persons without a license can be enjoined from the practice of medicine. The Supreme Court's ruling was made in the case appealed by the state from Linn county district court, where the state's petition asking that Banner Howard be enjoined from the practice of medicine and surgery without a license was dismissed.

A new type of filter, with interstices covered with silver, has been tested at the Pasteur Institute of Paris by Dr. Nicolas Metalnikov, and found to confer upon the filtered water the power to destroy living bacteria. The filter is made by adding chloride of silver to the moulding clay and baking at a high temperature of 2,200 degrees Fahrenheit.

A Pittsburgh physician, known for many years as "the doctor who never sent a bill," died the other day and left an estate consisting of \$800 in the bank and \$25,000 in unpaid accounts. The wonder is that he had the \$800.

Liquid drugs by the gallon and solids by the pound are manufactured in the University of Iowa's college of pharmacy for use in the institution's hospitals. Some of the items and amounts produced during last year are: Elixers, 30 gallons; antiseptic gargle, 800 gallons; milk of magnesia, 50 gallons; mercurial and zinc oxide ointments, 200 pounds; liquid soaps, 4,300 gallons; massage cold cream, 300 pounds.

The out patient department of Broadlawns General Hospital of Des Moines in a report for 1931 showed an increase in patients served of 130 per cent over 1930. In 1931, 14,699 patients were given medical aid.

Aid extended the needy and unemployed in 1931 cost the county of Scott \$39,989.36, of which \$32,950.26 was for groceries, fuel, rent, etc., and \$7,039.10 for hospitalization, according to the annual report of the county overseer of the poor. Medical treatment was furnished under a contract with the Scott County Medical Society.

The State Psychopathic hospital at Galveston, which is nearing completion, is one of the few in the country promoted by state funds. One of its "strictly modern" features will be a beauty parlor for women patients. "Primping up" is said to be a therapeutic aid in the treatment of certain classes of psychopathic patients.

When Hugh S. Cumming recently took the oath of surgeon-general (fourth term) he stated in a discussion of the present economic situation: "No profession has been so hard hit, on a whole, as medicine, because we can't have moratoriums on the doctors' duties, whether or not financial returns are available."

Clinton F. Smith, superintendent of the Allen Memorial Hospital, Waterloo, was elected president of the Iowa Hospital Association at luncheon Thursday noon in the Martin Hotel. He succeeds Robert E. Neff, of Iowa City.

Dr. Henry Schmitz, specialist in deep x-ray therapy, has ordered a million volt G-E deep therapy apparatus for his cancer clinic at Mercy Hospital, Chicago.

PERSONAL MENTION

Dr. and Mrs. James Marr and family, formerly of St. Louis, Missouri, have arrived in Silver City, where Dr. Marr will continue the practice of medicine and surgery. Silver City has been without a physician since the death of Dr. J. G. McCue.

Dr. A. A. Schultz of Fort Dodge, spoke to the Vocational Guidance group organized under a committee of the Kiwanis Club, Thursday, February 25, on "The Medical Profession as a Vocation."

Dr. J. Philip Cogley of Council Bluffs, was elected president of the Council Bluffs chapter of the Creighton University Alumni Association, Tuesday, March 1. Council Bluffs is one of the five cities now having a Creighton Chapter, the others being Omaha, Los Angeles, San Francisco and Chicago.

Dr. Thomas S. Hill, of the State University of Iowa, was the speaker at the weekly luncheon of the Decorah Commercial Club, March 14, talking on "Mental Hygiene."

Dr. C. C. Hall of Maynard, gave a talk on "Transmission of Disease," as part of a school program near West Union, Wednesday, March 16.

Dr. Evon Walker of Ottumwa, delivered a fifteen-minute address over radio station WIAS, Wednesday, March 23, entitled "A Real Fairy Story of Modern Medicine." This talk was on the fiftieth anniversary of Koch's announcement of the discovery of the tubercle bacillus.

Dr. J. Frank Auner of Des Moines, announces his new location at 618-19 Equitable Building, having recently moved from 512 Southern Surety Building, where he had practiced sixteen years.

DEATH NOTICES

Coakley, Orlo Elbert, of Creston, died March 3 at the age of fifty-one. Death followed an extended illness resulting from injuries received in an automobile accident about three years ago. He was graduated in 1901 from Barnes Medical College, St. Louis, and had long been a member of the Union County Medical Society.

Hubbard, Chester W., of Mason City, died Sunday, March 20, at the age of fifty-six of cerebral apoplexy. He was graduated in 1901 from the University of Illinois College of Medicine, and at the time of his death was president of the Cerro Gordo Medical Society.

McAllister, Benjamin Rush, of Mt. Pleasant, died March 10 at the age of sixty-five, after a short illness. He was graduated in 1894 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Henry County Medical Society.

Meehan, Joseph James, of Denison, died February 26 at the age of fifty-eight, as the result of cardiac failure. He was graduated in 1903 from Northwestern University Medical School and at the time of his death was a member of the Crawford County Medical Society.

Weaver, Arthur John, of Muscatine, died March 1 at the age of sixty-six after a brief illness. He was graduated in 1895 from Bennett Medical College, Chicago, and at the time of his death was a member of the Muscatine County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. MCCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

Fifty-Three Years of Specialized Practice in Iowa

In recording the medical history of Iowa, frequent reference is made to periods of practice extending to the half century mark, but the record of Dr. Henry B. Young of Burlington of fifty-three years of specialized practice devoted to diseases of the eye and ear, is unique in Iowa, and probably has few equals anywhere.

On the twentieth of last month Doctor Young celebrated his eighty-first birthday in good health and spirits, and is still active in the practice of his chosen specialty. Following his graduation in 1875 from Chicago Medical College (Medical Department of Northwestern University), he engaged in general practice in Monmouth, Illinois, the city of his birth, and where his father had practiced before him. During the winter of 1876-7, he carried on post graduate studies in Vienna and Edinburg, being specially attracted to the latter city by the remarkable work of Joseph Lister in antiseptic surgery. A year later he attended post graduate courses in ophthalmology given by Dr. Herman Knapp of New York City. He remained in Monmouth until December, 1879, when, as he says, "with some reluctance" he came to Burlington, Iowa, to engage in special practice limited to diseases of the eye and ear, to which he has faithfully devoted his energies and talents ever since.

His interest in societies pertaining to his specialty, and frequent publications indicate his important contribution to the development of these highly specialized types of medical practice. He is the author of priority monographs on auto-intoxication, amblyopia; the sociologic aspect of profound deafness; the visual requirements of engine men, and numerous articles on medical, scientific and economic subjects.

In October, 1881, he inaugurated the courses in ophthalmology and otology in the College of Phy-

sicians and Surgeons of Keokuk, continuing the lectureship until March, 1885. Since the organization of St. Francis, Burlington and Mercy Hospitals he has been a member of the attending or consulting staffs.

At the present time he is the Senior Ophthalmologist in the Medical Service of the Chicago, Burlington & Quincy railroad. He joined the Chicago Ophthalmological Society in 1901 and is now listed as honorary member. In 1897 he was elected to membership in the American Academy of Ophthalmology and Otolaryngology and is now a life member. His frequent contributions to the program of the Section of Ophthalmology and Otolaryngology of the Iowa State Medical Society has greatly advanced the scientific investigations and beneficent purposes of these specialties in our state.

In 1880 he became a member of the Iowa State Medical Society and two years later joined the American Medical Association, so that for more than fifty years he has been an active supporter of organized medicine and taken no small part in maintaining its high standards and ideals. He was elected to the presidency of the state society in 1899, and is thus its oldest living ex-president. Thrice he has been honored by the Des Moines County Medical Society as its president, the last time in 1931.

At the session of the Iowa State Medical Society in Sioux City, May 3-6, 1932, he will represent Des Moines County in the House of Delegates.

Doctor Young was fortunate in his lineage and opportunities for educational training. He carries the Scottish strain of the old Wallace clan and the sturdy pioneer stock that settled this country in the middle of the eighteenth century. Raised in the atmosphere of medicine, as his father was a physician, he was thus profoundly im-



DR. JOHN A. YOUNG

pressed at a young age by the example of dignity, honesty, industry and capability of one of the leading practitioners of early medicine in Illinois.

This environment no doubt influenced his cultural and medical education. At the age of nineteen years he received his bachelor of arts degree from Monmouth College after completing the old standard course of six years which included five years of Latin, ending with Horace; four years of Greek, ending with Euripides; one year of German; five years of mathematics, ending with differential calculus, and two years of the sciences, with logic, rhetoric, and psychology. His degree of doctor of medicine was conferred after completing a three-year graded course which was quite unusual at the time, 1875. During his senior year he was appointed house surgeon of Mercy Hospital, Chicago, in recognition of superior class work.

The senior Dr. John A. Young was born in 1812, graduated from the Cincinnati Medical College in 1838 and located that year in Monmouth, Illinois, continuing to his death in 1874. It will be noted that the two generations of Doctors Young cover the remarkable period of ninety-four years of continuous medical practice in the states of Illinois and Iowa, with every indication of passing the century mark.

TWO INTERESTING DIPLOMAS

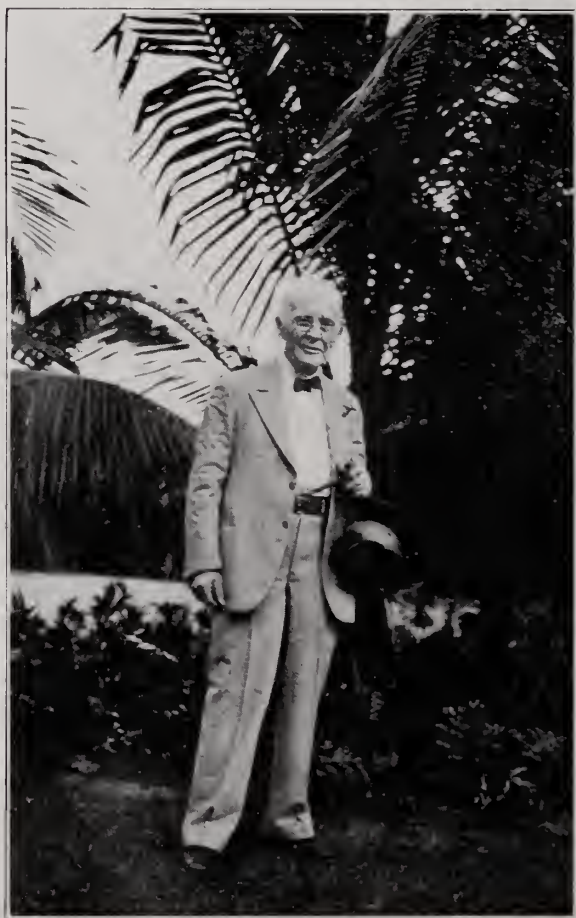
In connection with the above sketch, two diplomas are illustrated, herewith, that have distinct historical value and interest.

The first was granted to John A. Young by the Cincinnati College, Republic of Ohio, on March

3, 1838. This college was founded in 1819 and was the first medical school established west of the Alleghenies. It is now continued as the University of Cincinnati College of Medicine. The appended signatures make it an historical treasure. Daniel Drake is referred to by Garrison, the historian, as "the greatest physician of the West, and one of the most picturesque figures in American medicine." His greatest achievement was his work on the "Diseases of the Interior Valley of North America" (1860-4) the result of thirty years' labor, being an encyclopedia of the topography, hydrography, climate and meteorology, as well as complete descriptions of the fevers of the Mississippi Valley.

Samuel D. Gross, later professor of surgery in Jefferson Medical College, Philadelphia, was regarded as the greatest American surgeon of his time. He wrote the first exhaustive treatise on pathologic anatomy in English (1839) which was highly commended by Virchow.

Willard Parker, later a prominent surgeon of New York, was known for his surgical treatment



DR. HENRY B. YOUNG

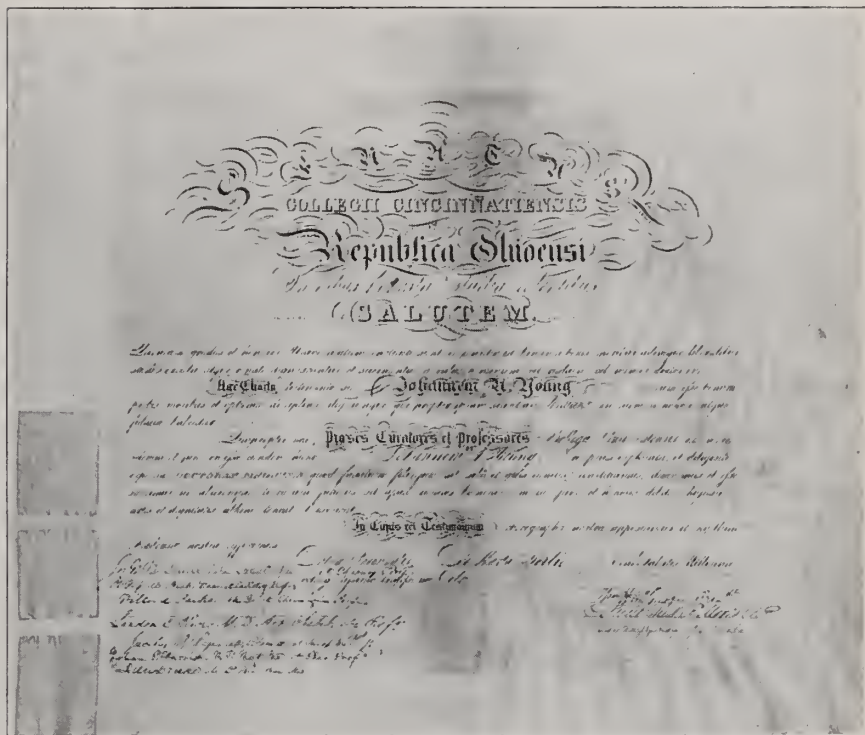
Photograph taken two years ago in Honolulu

of subclavian aneurism (1864) and for performing the first operation for appendicitis in America (1864).

The second diploma was issued by the Chicago Medical College to Henry Bird Young on March 16, 1875. On this interesting sheepskin, inscribed fifty-seven years ago, are noted several interesting names connected with the early medical education of the middle west. N. S. Davis, the founder of the American Medical Association, and father of the three and four-year graded courses of medical study; W. H. Byford, Edmund Andrews, John H. Hollister, and W. S. Haines also have honored places in American medicine.

Two grandsons of the above, N. S. Davis, III, and Edmund Andrews, III, are carrying on the fine traditions of their ancestry as teachers of medicine and surgery in Northwestern and Chicago universities.

The historical department of the JOURNAL is obligated to Dr. Henry B. Young for the privilege of publishing these two interesting diplomas.



ARTHUR JOHN WEAVER, M.D., F.A.C.S.

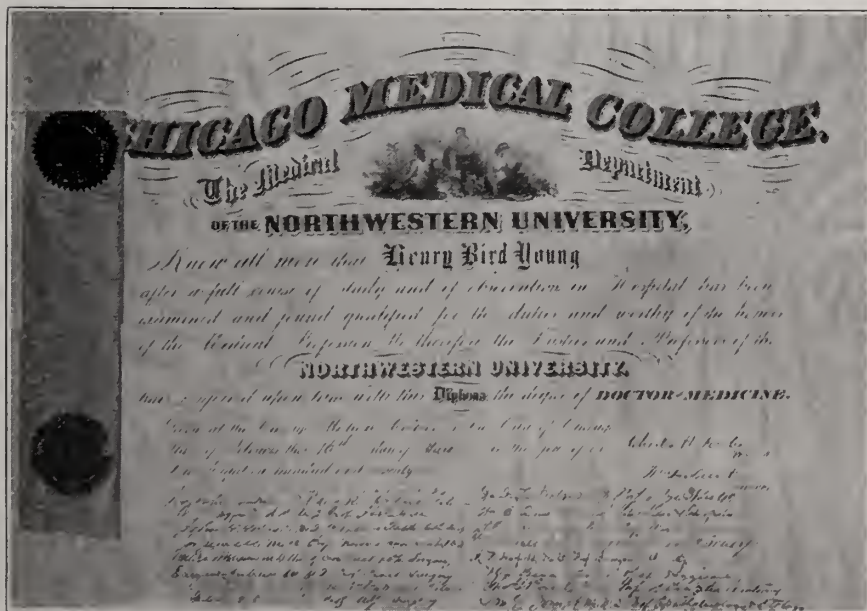
1865-1932

After an illness lasting but three days, Arthur John Weaver died at 2:00 a. m., March 1, 1932. He was born on a farm in Muscatine County, Iowa, on July 27, 1865. He grew to manhood and spent his entire life in the community of his birth, devoting thirty-four years to the practice of medicine. He received his elementary education in the schools of the county, became a teacher in these schools, and

later was graduated from Toledo Academy, at Toledo, Iowa.

He then began the study of medicine at the Bennett Medical College in Chicago, and was graduated with honors in the class of 1895. His training continued as an interne at Cook County Hospital, a service he always cherished. His association with the great teachers of the time undoubtedly greatly enhanced his subsequent career as a man and physician.

Doctor Weaver was a lifelong and active member of the Muscatine County Medical Society, the Iowa State Medical Society, and the American



Medical Association. He was also a Fellow of the American College of Surgeons, and, at the time of his death, a member of the Iowa State Board of Health.

In February, 1905, in association with Dr. J. L. Klein, he founded the Bellevue Hospital of Muscatine, an institution which has been successfully conducted ever since.

Doctor Weaver's desire for self-improvement made him especially willing to investigate the value of new ideas. His advancing years found him constantly endeavoring to increase his efficiency and activities and giving more and more of his time to his many admiring patients. Because of his many fine characteristics and capabilities and his high standards of life, he secured a place for himself in the hearts of those who knew him. He always exemplified the best qualities of the family physician who knows the obligations of his profession and, in the broadest sense, fulfills them.

T. I. Wigim, M.D.

THE OPEN FORUM

PERKINS HASKELL-KLAUS LAW

Editor of the Open Forum:

The proposal to change the Perkins Haskell-Klaus law so that the county pays half and the state pays half sounds good, but from the standpoint of the hospitals and physicians throughout the state it is a huge joke. It would mean that any work done by them would be for just half of what the University Hospital and staff would get, or, according to estimates of the Committee on Education, about \$2.22 per day. Remember, this would include both hospital and doctor's bill. The average cost in the outside hospitals is now \$2.70 or fifty cents more than the proposed rate, and I wonder at this rate, where the doctor would come in?

Anyone who ever dealt with a board of supervisors or social worker knows that the first question they ask is, "Which is the cheapest way for the county?" They consider anything paid by the state as no concern of theirs. At least they say, "The county only pays one-one hundredth of it."

The only fair way is to let the state pay the transportation and examination fee, and the county pay the hospital and physician's bill at Iowa City. This would equalize the cost between differently located counties and give the physicians and country hospitals an even break in getting the indigent work to which they are justly entitled.

When we, as physicians, favor anything less, we are working under the thought that "We physicians and hospital workers work for the love of the indigent," and that the "laborer is worthy of his hire" was not written of doctors and nurses.

To make the fifty-fifty split fair, the state would have to pay the physicians and hospitals throughout the state the same amount that the county paid them, just as they do the University Hospital.

There will be plenty of clinic material for the medical school after the cases which should be kept at home, are kept there, under the arrangement I suggest. It would furnish much better selection for teaching purposes.

It has been suggested that it is too bad not to use the University Hospital to full capacity. Maybe so, but I have seen days when our local hospitals had empty rooms, and times when a small fee would have helped me appreciate "Thank you, doctor; well done."

Possibly from the standpoint that state medicine, mass production, and a big impressive central institution is the desired goal, the present, or the fifty-fifty proposal is fine. But personally, I still believe that the doctors already graduated, the smaller hospitals throughout the state, the 2,100 waiting list, and the local taxpayers have some interests to be considered.

E. B. Williams, M.D.,
Montezuma, Iowa.

COUNTY SOCIETIES SUPPORT STATE PROGRAM

Black Hawk County

At our annual meeting, January 13, 1932, it was moved "that the Black Hawk County Medical Society sanction and endorse the work of the Iowa State Medical Society and also the increase in the dues."

This motion was carried unanimously. This action shows clearly the concerted opinion of this society concerning the governing body of our state medical society.

Discussion also brought out the fact that the salary of the managing director was none too high.

Eugene Smith, M.D., Secretary.

Palo Alto County

At a meeting of the Palo Alto County Medical Society in Emmetsburg on January 18, it was resolved that the Palo Alto County Medical Society endorse the policies of the Iowa State Medical Society in its activities and to commend Mr. Blank for his work.

Harold L. Brereton, M.D., Secretary and Treasurer.

MEETING AMERICAN PROCTOLOGIC SOCIETY

The annual meeting of the American Proctologic Society has been announced for Friday and Saturday, May 6 and 7, at Memphis. This society was organized in 1899 for the purpose of investigating and disseminating knowledge relative to the rectum, anus and colon and is a society with a definitely limited membership. Regular and orthodox practitioners, members of the American Medical Association, who are not affiliated with medical groups admitting those not members of the American Medical Association, are hereby cordially invited to attend the meeting. It will be noted that this meeting comes immediately prior to the American Medical Association meeting in New Orleans. Full information relative to the program and speakers may be obtained from Curtice Rosser, 710 Medical Arts Building, Dallas, Texas.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***ASTHMA AND HAY FEVER IN THEORY AND PRACTICE.**—Part I.—Hypersensitiveness. Anaphylaxis. Allergy.—By Arthur F. Coca, M.D., Professor of Immunology, Cornell University Medical College. Part II.—Asthma.—By Matthew Walzer, M.D., Instructor in Applied Immunology, Cornell University Medical College. Part III.—Hay Fever.—By August A. Thommen, M.D., Lecturer in Medicine, University and Bellevue Hospital Medical College.—Charles G. Thomas, Publisher, Springfield, Illinois, 1931.—Price, \$8.50.
- ***CONQUERING ARTHRITIS.**—By H. M. Margolis, M.D., Pittsburgh, Pennsylvania.—Published by The Macmillan Company, New York, 1931.—Price, \$2.00.
- ***A DOCTOR OF THE 1870's AND 80's.**—By William Allen Pusey, past president of the American Medical Association and of the American Dermatological Association.—Price, \$3.00 postpaid.—Charles G. Thomas Company, Springfield, Illinois, and Baltimore, Maryland, 1932.
- ***HEALTH PROTECTION FOR THE PRE-SCHOOL CHILD.**—A National Survey of the Use of Preventive Medical and Dental Service for Children Under Six.—(A Publication of The White House Conference.)—The Century Company, New York and London, 1931.—275 pages.—Price, \$2.50.

- ***THE HUMAN VOICE—Its Care and Development.**—By Dr. Leon Felderman, member of the staff of Philadelphia General Hospital and the Jewish Hospital, Philadelphia.—Henry Holt and Company, One Park Avenue, New York City, 1931.—Price, \$2.50.

- INFECTIONS OF THE KIDNEY.**—By Meredith F. Campbell, M.D., F.A.C.S., Attending Urologist, Babies Hospital, etc. Harper's Medical Monographs, Harper & Brothers Publishers, New York, 1931. Price, \$3.00.

- PRIMER ON FRACTURES**—Prepared by the Cooperative Committee on Fractures of the American Medical Association.—Second Edition, revised and re-edited, 1931.—Price, \$1.00.

- ***THE ROCKEFELLER FOUNDATION ANNUAL REPORT—1930**—Published by The Rockefeller Foundation, New York.

- SURGICAL CLINICS OF NORTH AMERICA.**—(Philadelphia Number—December, 1931.)—Volume II, No. 6.—309 pages with 87 illustrations. Per Clinic Year (February, 1931, to December, 1931.)—Paper, \$12.00; Cloth, \$16.00 net.—Philadelphia and London.—W. B. Saunders Company, 1931.

BOOK REVIEWS

ASTHMA AND HAY FEVER IN THEORY AND PRACTICE

Part I.—Hypersensitiveness. Anaphylaxis. Allergy.—By Arthur F. Coca, M.D., Professor of Immunology, Cornell University Medical College. Part II.—Asthma.—By Matthew Walzer, M.D., Instructor in Applied Immunology, Cornell University Medical College. Part III.—Hay Fever.—By August A. Thommen, M.D., Lecturer in Medicine, University and Bellevue Hospital Medical College.—Charles G. Thomas, Publisher, Springfield, Illinois, 1931.—Price, \$8.50.

During the past year several excellent treatises on allergic conditions have been published. This is significant of the attention which is being directed towards these conditions and their importance in the management of many obscure and troublesome clinical manifestations.

This volume, while limited to a discussion of the theoretical consideration of hypersensitiveness, anaphylaxis, and allergy and their manifestations in asthma and hay fever, presents the subject in a most thorough and authoritative manner. It is, indeed, pleasing to read a discussion such as that presented by Dr. Coca demonstrating his ability to select from the tremendous literature on the subject of allergy the worthwhile and lasting observations and to so correlate these observations that they present a satisfactory background for the study of this rather obscure phenomenon.

Dr. Walzer in his section on asthma presents the subject from the viewpoint of allergy, treating the various clinical manifestations from the standpoint of their diagnosis and treatment as allergic conditions. His chapter, devoted to atopens and other excitants, is one of the most readable presentations of

this subject which has come to the attention of the reviewer.

Part III, written by Dr. Thommen, discusses hay fever as a manifestation of hypersensitiveness and presents the subject with thoroughness from the standpoint of the diagnosis of the offending pollen, the non-specific treatment and the specific treatment with pollen extracts.

Following each section of the text is a very complete bibliography of the most important contributions in the recent literature to the respective subjects. For the physician who wishes to pursue a study of allergy and its manifestations as related to asthma and hay fever, this volume stands preëminent in the field. To every student of allergy the volume is recommended especially for the excellent presentation of the underlying phenomena since an appreciation of this phenomenon is essential to an understanding of the various manifestations of allergy.

CONQUERING ARTHRITIS

By H. M. Margolis, M.D., Pittsburgh, Pennsylvania.—Published by The Macmillan Company, New York, 1931.—Price, \$2.00.

Rheumatic conditions, acute and chronic, constitute primarily and secondarily a large bulk of all illnesses. Chronic rheumatic conditions are among the most perplexing encountered by the physician in general practice since the condition is frequently not sufficiently severe to completely incapacitate the patient and, on the other hand, sufficiently incapacitating to render him less useful and quite miserable. Patients with chronic rheumatic conditions frequently resort to patent remedies resulting in a loss of much valuable time in the management of their conditions. It is the aim of this small book, written primarily for the arthritic patient, to acquaint him with the facts

bearing upon his condition and furnishing a background for the prognosis which, because of the chronicity of the disease, is at best not entirely satisfying. It is not the purpose of the book to offer a guide for self-treatment, but rather to enlighten the patient and make the physician's instructions and advice more understandable. The book adequately fills the need for which it has been prepared.

A DOCTOR OF THE 1870's AND 80's

By William Allen Pusey, past president of the American Medical Association and of the American Dermatological Association.—Price, \$3.00 postpaid.—Charles G. Thomas Company, Springfield, Illinois, and Baltimore, Maryland, 1932.

Many historical sketches have been presented purporting to reflect the difficulties and the hardships endured by the early practitioners. Many of these are of little value historically since the picture is so colored that an appreciation of the character is lost. In this volume Dr. Pusey presents a character study of his father, and appreciating the shortcomings of many volumes of this nature, has attempted to make his presentation an historical outline omitting the elements of romance which have been so largely stressed by others. Every physician should read this volume for the inspiration which he will derive from the contemplation of the physician of a generation ago, when many of the conveniences and accessories in diagnosis which we consider so important today were unknown. These older physicians stand out because of their skill and ability at the bedside, because of their thorough understanding of human nature, and because of their close attention to every detail of symptomatic therapy.

HEALTH PROTECTION FOR THE PRE-SCHOOL CHILD

A National Survey of the Use of Preventive Medical and Dental Service for Children Under Six.—(A Publication of The White House Conference.)—The Century Company, New York and London, 1931.—275 pages.—Price, \$2.50.

The White House Conference on Child Health and Protection collected reliable data on approximately 146,000 children living in cities and 37,000 children living in the country or in towns of less than 2,500 inhabitants. Their survey extended into 42 states and reliably reflected health conditions among the 16,000,000 children in the United States today. In this volume they have presented the results obtained in the studies in the most complete and graphic form indicating the extent of preventive medicine now offered to this group including dental and home nursing services.

The volume is divided into four sections, the first dealing with the operation of existing agencies for promotion of health; Part II, preventive medical and dental service; Part III presenting detailed reference

tables for all groups and grades investigated; and Part IV, a survey of the administration and the basis for the computations presented in the report.

The volume will be of tremendous value in shaping the activities of all public health agencies dealing with children, in guiding pediatricians in their contact with these established agencies, and finally in offering a background for a more satisfactory course of study in medical schools.

THE HUMAN VOICE

—Its Care and Development.—By Dr. Leon Felderman, member of the staff of Philadelphia General Hospital and the Jewish Hospital, Philadelphia.—Henry Holt and Company, One Park Avenue, New York City, 1931.—Price, \$2.50.

Science has recognized that music is a powerful and healing drug, and may be used to produce either a stimulating or soothing effect. Music has become a part of the curriculum of most schools, being presented in some form from the kindergarten through high schools and colleges and into the universities.

This volume has been compiled to bridge over the difficulties between the teachers of voice culture and the pupil. The author does not attempt to treat irregularities or impairments in the human voice, but rather to discuss in an intelligent and sympathetic fashion the etiologic background of speech defects and outline the physiology concerned. He discusses, for example, the phenomena of speech; Music: a science, an art; infection and inflammation of the nose and throat as they may effect the voice, the effects of alcohol and tobacco on the upper air passages, quacks, nostrums, the role of fatigue, and various anomalies of speech.

The illustrations presented in the volume are sketches in line drawings of the anatomic parts involved in the production of vocalization.

THE ROCKEFELLER FOUNDATION ANNUAL REPORT, 1930

Published by The Rockefeller Foundation, New York.

This annual report summarizes the activity of the Rockefeller Foundation during the calendar year of 1930. This fund, which now amounts to over \$143,000,000 is being administered in promoting international health, in furthering medical sciences, in developing natural and social science, and in promoting the humanities. Typical of its administration is the program of International Health which is reported as follows: "The Foundation's program, then, involves two major lines of effort, one concerned with research in the field and one with aid toward the establishment of well-rounded efficient local health organizations, backed by government authorities and functioning with the active cooperation of the population."

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A SURGICAL CLINIC*

CHARLES J. ROWAN, M.D., Iowa City

Mr. President and Members of the Society: When I came to look over patients for the clinic this morning, I found that one who had promised to be interesting had ceased to be a patient and had become a postmortem. Another one was interesting because his was a borderline case, but so evidently medical rather than surgical that I had to pass him up. I really did not know enough about the other case to attempt to demonstrate it to you.

Dr. Noonan has worked hard in attempting to assemble patients for a clinic, and I appreciate his work very much, but it just simply did not happen to work out that the patients could be procured. I therefore thought I might better occupy the time by reporting abstracts of case histories from the University Hospital, each of which illustrates some points which I consider of great importance in diagnosis or treatment.

The first patient was a man thirty-six years of age who entered the hospital with a complaint of severe pain in the abdomen. The story was that four hours before entrance, while at work, he was suddenly seized with severe pain in the epigastrium. He was able to walk three blocks to his home, but the pain continued to increase and soon doubled him up so that he could not walk. His physician was called, and immediately sent him to the hospital, where he arrived in four hours from the time of onset. He had vomited once since the beginning of the attack, and there was no blood in his vomitus. This was evidently a case of what is so often called acute surgical abdomen.

The point I want to make is that it is not enough to make a diagnosis of acute surgical abdomen, because some acute abdomens, while they may become surgical, should not be operated upon immediately, while others should have the benefit of an immediate emergency operation. There is the importance of differentiating between a gall-stone, acute cholecystitis and some perforated condition.

For instance, a very important thing in a perforated case is to shorten the time of operation as much as possible. The patient is in shock as a rule. If we are content to say, this is an acute abdominal condition and operation should be performed, the most common acute abdominal condition is acute appendicitis. Therefore we will say, this is probably appendicitis, and make our incision accordingly. We are likely to injure the patient in two ways. First, we may find after the incision has been made that the appendix is not to blame. Then we must extend our incision upward. Second, we must do an exploratory operation, necessitating a good deal of handling of intestines and so forth, which is not a good thing for a patient in shock.

Another point is that very often in perforated cases with peritonitis, the appendix shares in the inflammation, the same as the rest of the abdominal viscera. There is lymph there and pus around it and so forth. I have more than once seen an appendix removed in a case diagnosed as acute appendicitis, in which the patient died from peritonitis as a result of perforation. You will not lose much time if you inquire into these cases while the operating room is being prepared.

On inquiry we found that the patient under discussion had had for years what he called a weak stomach. He could not eat fried food; he had a great deal of heart-burn and occasional vomiting, but no blood. Physical examination showed the patient lying on his back with the knees drawn up. He looked anxious and seemed to be in severe pain. There was a cold sweat on his face. His pulse was 92; respiration 22; temperature 99; leukocytes 12,000. The urine showed nothing out of the way. The abdomen was held very tightly. There was board-like rigidity and practically no peristaltic sounds.

A diagnosis was made of probable perforation of the stomach or duodenum. Operation was performed immediately under ethylene-ether, and a perforated peptic ulcer was found. The incision was made in the upper right rectus. The abdomi-

* Presented before the Seventy-ninth Annual Session of the Iowa State Medical Society, Marshalltown, May 14, 15, 16, 1930.

nal cavity contained considerable free sticky fluid. There was a small perforation almost directly over the pyloric ring anteriorly which was surrounded by a large indurated mass. Closure was difficult because of the surrounding induration and it was found that considerable narrowing was produced, so that sooner or later the patient would have mechanical trouble there.

This indicated a posterior gastro-enterostomy. I make the point that in this particular case the suture of a perforation made a distinct narrowing which would produce some degree of obstruction. That is the reason I did a posterior gastro-enterostomy. It is all right for Deaver to recommend it, but few of us can do it so rapidly and efficiently as Deaver. I feel as a rule that unless there is a narrowing produced by the suturing, probably the operation should terminate there instead of continuing with a posterior gastro-enterostomy. I am sure the immediate mortality would be lower, and the patient would later be in better condition.

I make this short abstract to emphasize several points, the first of which is the importance of diagnosis. The diagnosis of acute abdominal condition is not sufficient, for the reasons I have already illustrated.

I also mentioned the importance of early operation. These patients should not be treated with the idea that it may become necessary to operate. I think most surgeons will agree that the time element between the time of perforation and the time of operation is the most important thing with which you are dealing. I have often said that I believe very firmly it is much better for the patient with a perforation to be operated upon within two, three or four hours after perforation by a surgeon who just occasionally operates, or, let us, say, who operates because this is an emergency and must be done, rather than that the patient should be operated upon after twelve or eighteen hours by the most expert surgeon in the country.

I have already mentioned that I consider gastro-enterostomy indicated only when the repair of the perforation causes some degree of narrowing.

Next we come to acute pancreatitis. While it is seemingly one of the rare conditions, I think it is so largely because it is not commonly recognized, even when present. When we find that such cases are reported by reliable individual surgeons to the number of twenty or thirty in a short period of time, we must feel that we may quite frequently be overlooking them if they are so rare in our experience.

This patient was a woman aged forty-seven. A note was made, "very obese." She complained of pain in the upper abdomen and in the back; the

pain in the back was rather extreme. There was also profuse vomiting, not dependent upon eating. She would vomit every once in a while even if she swallowed nothing. There was distention of the abdomen.

The story was that for five years she had been having occasional attacks of pain in the upper right abdomen. She thought the attacks numbered about twenty during the five years. She was in good condition between the attacks except that for the last five years she had had considerable gas on her stomach and a good deal of belching. She was troubled considerably with constipation, and there was always a little soreness in the upper abdomen. She was in pretty good health except for these slight symptoms.

Her present acute attack began six days before admission to the hospital, with severe pain in the right upper abdomen and in the back, nausea, repeated vomiting and diarrhea. You would say here was an obese patient at the age of forty-seven, who for five years had been having acute pains in the upper abdomen, brought on by greasy foods, and so forth, with a good deal of belching in between, and a little soreness. You would say that it was probably a cholecystitis; that she had chronic cholecystitis with acute exacerbation from time to time.

What we noticed was a little different from the ordinary cholecystitis. First, the pain was severe in the abdomen and epigastrium and also in the back, but her pain was across the middle of the back and not a right subscapular pain such as you get in cholecystitis. Her pain was a deep, boring pain across her back. She had abdominal pain, but she kept complaining just as much about the pain in the back. That is not characteristic of cholecystitis. Another thing was the more than usual amount of vomiting and the pronounced diarrhea, which does not ordinarily occur in a patient having acute cholecystitis. She was given hypodermics which gave temporary relief from pain.

Two days before she entered the hospital; that is, three days after the onset of the attack, the vomiting became much greater and more frequent. The distention of the abdomen and the pain in the back were increased. This continued until her entrance to the hospital, where it was found that her abdomen was very much distended. There was great tenderness in the right subcostal region, extending across to the left side. There was a moderate degree of jaundice, but not sufficient to indicate, for instance, a complete blocking of the common duct by a stone. The temperature was 99.6; pulse 136. The pulse was out of proportion to the temperature and to the leukocytosis, which was 12,000. She was in a cold sweat and respira-

tions were very rapid. In other words, the patient was in a condition of shock.

I do not know what we are going to teach as to the indications for operation in cases of acute cholecystitis. We have made an exception. We have said, "Yes, the diagnosis of acute appendicitis means immediate operation, the reason being that you can never tell just the condition of this acute inflamed appendix." You know there is always considerable danger of perforation and general peritonitis. We have felt, however, that in acute cholecystitis that rule does not apply. First, in acute cholecystitis there is not the great degree of danger of perforation and general peritonitis, and second, operation during the acute stage of cholecystitis carries a much higher mortality than during the interval.

Next, the difficulties encountered technically in the removal of an acutely inflamed gall-bladder are great, because of the amount of infiltration and edema extending down along the cystic duct, making injury of the common duct more likely. Thus, when we operate for acute cholecystitis we are more likely to turn the operation into a cholecystotomy than a cholecystectomy. I am becoming more inclined to operate on the average case of acute cholecystitis. I do not mean I have yet adopted it as a routine, but I wonder if it is not coming.

Anyway I think most surgeons will agree now that we do not advise operation for acute cholecystitis. If so, it is important to realize that there may be other conditions present. If you are postponing operation and saying, "I do not operate for cholecystitis," and you are dealing with another condition, you may do the patient harm. In the case reported, the patient had enough symptoms to indicate that there was something more than the acute cholecystitis, although her attacks had covered a period of five years. There was the great amount of vomiting, severe pain in the back, the boring pain in the middle of the back rather than up under the right scapular, diarrhea, and a pulse rate of 136, although she had little fever, and only slight jaundice.

You might say, "Well, even if you did not make a diagnosis, this was acute cholecystitis and it was bad enough to explore." That would be doing the right thing. This thing of saying that as a routine we do this and do that, of course, is a mistake. This patient was operated upon as an emergency case, although that was not our rule in cases of acute cholecystitis, but because of her very serious condition we felt there was something more than acute cholecystitis. I do not remember whether we thought it was pancreatitis or not.

At operation there was found very great distention of the intestines, accounting for her large

abdomen and for the absence of peristaltic sound. Besides this there was found acute cholecystitis with stone. There was also fat-necrosis, and of course that meant we were dealing with pancreatitis. You will sometimes get areas of fat-necrosis in other acute conditions besides acute pancreatitis. For instance, I have found fat-necrosis scattered pretty profusely when doing an exploratory operation, although the case was not acute pancreatitis, but a perforation of the duodenum. In other words, the pancreatic juice may be so concentrated in the duodenal contents that if you get a perforation, fat-necrosis will result. In that case, however, the fluid in the peritoneal cavity is more characteristic of duodenal ulcer perforation than of acute pancreatitis, in that it is a thick fluid with some green color, although not dark, is profuse, very sticky and grumous. That suggests perforation and leads you to explore the duodenum.

On the other hand, if instead of that you find bloody fluid; if you find the peritoneum showing evidence of inflammation, great hyperemia, great distention of the intestines, and fat-necrosis, then the pancreas is diseased. It is not always easy to say that a patient's pancreas is diseased, for two reasons: First, that pancreas seems to vary a good deal normally. Sometimes one pancreas is larger than another, or one is harder, or one has larger lobules, and so forth. Sometimes when surgeons palpate the pancreas, it seems a little hard or seems a little large. Another reason is that it is not easily accessible to examination. However, in the acute pancreatitis, the pancreas will be large and soft. You may wonder if there is some pus, because it is so soft it seems edematous.

In this case stones were removed, the gall-bladder drained, and a drain led down to the pancreas. There were no areas in the pancreas soft enough to make me think there was a collection of blood that had to be drained or any broken down tissue. I believe in the average case of operation on the pancreas, we should hesitate, if there is acute pancreatitis, in doing any more than removing the stones and draining the gall-bladder. In that way we are getting at the cause. If there is evident sloughing of the pancreas, then we must go further and drain. In this case we did nothing but attack the gall-bladder as the cause, remove the stones and drain. Injections of saline solution and glucose were given on the table. The patient developed a postoperative double lobar pneumonia, but recovered. A note is made that she took large amounts of fluid, as high as 6,000 c.c. in twenty-four hours, mostly saline and glucose, per rectum. I think that is worth mentioning. The patient came to us in shock and very poor condition. In spite of the fact that she developed a double post-

operative lobar pneumonia, she recovered. I think the fluid had more to do with the recovery than anything else. The more fluid that such patients take, the better they will do, other things being equal.

To recapitulate, the characteristics of pancreatitis were her obesity, gall-stones, persistent diarrhea, moderate jaundice due to the swelling of the pancreas rather than the stone in the common duct, pain in the back and to the left, fat-necrosis, and very poor condition on entrance.

The next case report I have is one of a chronic condition. The patient entered the hospital with the complaint of indigestion. She was forty-three years of age. For several years she had had spells of indigestion. You know, of course, that patients may speak of different symptoms as indicating indigestion. Hers were distress in the upper abdomen after eating, feeling of distention, some bloating, belching, occasional vomiting, with some relief, and only occasional real pain, referred more to the right scapula than to the abdomen. The pain was never severe enough to require hypodermics. Sodium bicarbonate sometimes helped but there was no food-ease, and no jaundice at any time. Attacks were likely to be brought on by greasy foods or by eating too much. Sometimes there was slight soreness in the upper abdomen. Even between attacks she had a tendency to bloat and raise much gas. There had been no loss of weight; her appetite and general health were good.

I remember when I was an interne, it used to be said that the Americans were a race of dyspeptics due to their habit of eating quick lunches at lunch counters, bolting down food, and so forth. Today you don't hear much about the Americans being a race of dyspeptics, at least I have not heard it mentioned for a good many years, the reason being that the dyspepsia, of course, was due to things that were not recognized. The two great causes were ulcer of the stomach and cholecystitis. This woman was forty-three years old. Of course, those symptoms all pointed toward chronic cholecystitis. She had seven children, the oldest twenty; had not had typhoid; the pregnancies were all normal. General examination was negative. The patient weighed 180 pounds and was not neurotic. The abdomen showed nothing except slight tenderness on pressure over the gall-bladder.

Whenever I see a patient who I think may have a chronic cholecystitis and who complains of severe superficial tenderness, I begin to question the diagnosis right away and think maybe it is something else, because typical gall-bladder tenderness is slight; it is generally brought out only by deep inspiration. I think that we are quite likely to expect a greater degree of tenderness than may be

present. As a matter of fact, the characteristic tenderness must be brought out by deep palpation and also by deep inspiration at the same time. In some cases Murphy's old method is necessary.

Blood examination in this case showed 9,500 leukocytes, blood pressure 130/75. The gastric analysis was normal except there was no free acid in one test and only 8-free in another. The symptoms were strongly suggestive of a chronic cholecystitis. All we had to go on was the little tenderness, no jaundice; she never had acute attacks or pains. If she had been a neurotic patient I think we would have had considerable difficulty.

It is in such cases that the Graham-Cole test has been of benefit. We depend upon it a great deal. It seldom abuses our confidence, if it is properly given and properly interpreted. Since September I have seen only one case in which, in spite of the fact that the Graham-Cole test was negative, I made a diagnosis of cholecystitis. In that case operation was performed. The gall-bladder was found negative. That pretty well corresponds with my experience. I do not mean that where you have a history of acute attacks, with jaundice, you should demand a Graham-Cole test in every case, but I feel that in a great many cases where there are not altogether typical indications you should not make a diagnosis without resorting to the Graham-Cole test.

It was done in this patient and the report was that it suggested chronic cholecystitis. Of course, a good radiologist does not make a diagnosis of cholecystitis with a Graham-Cole test. He reports what his findings are and says "This suggests chronic cholecystitis," realizing that we should never depend altogether on one laboratory test.

At operation a white, thick gall-bladder was found, with no adhesions and no stones. In this case there was enough thickness and whiteness so that we could say there was chronic cholecystitis. We have seen gall-bladders that looked about that thick and pale that were probably normal. I have been a little hesitant sometimes to say definitely there was cholecystitis present because of the very slight change in the gall-bladder wall. Maybe it was a case of strawberry gall-bladder where, of course, the change in the gall-bladder wall is very slight and the change is practically all in the mucosa. I find that an examination of the lymph nodes along the cystic and common duct decides for me sometimes, because in spite of the fact that the gall-bladder shows very little change, these enlarged lymph nodes indicate there has been inflammation, and probably a certain degree of it re-

mains. That has decided me in more than one case to take out a gall-bladder.

Another thing is the area of hepatitis you are likely to find in the neighborhood of the gall-bladder. The average man in speaking of hepatitis so commonly accompanying gall-bladder disease has in mind, generally, hepatitis of the entire liver, but I feel that if you have a chronic cholecystitis you must be more interested in the little area around the gall-bladder, because that is likely to be firmer and whiter than the rest of the liver. I think this local hepatitis means a great deal.

The points taught us by this case are that diagnosis before operation may be indicated by the history, even in cases where there are no particular symptoms. Next, we must diagnose cholecystitis in the majority of cases without the presence or history of jaundice. I think that symptom is considerably neglected even yet. I do not mean the symptom is neglected, but the realization that most cases of cholecystitis that are being operated on nowadays are made with no history of jaundice.

Let us realize that the jaundice, while it is a great help when present, should not strongly contra-indicate the diagnosis of chronic or acute cholecystitis. We must make the diagnosis in the absence of colic. If we are going to operate upon these patients, the best time is before complications set in, and great tenderness should not be demanded. It is very important to operate before complications have arisen because the operations on gall stones, in cases of uncomplicated cholecystitis carry with them a mortality rate which is not more than twenty per cent of the mortality rate present after complications develop.

Next is the case of a girl aged twenty-one. She entered the hospital because of pain in the upper and in the lower right quadrants of the abdomen. This pain came on in definite spells, and in between the attacks of pain she was perfectly well. They began eighteen months before she entered the hospital, with pain at McBurney's point. This was especially noticed when she was working. Soon the pain began to extend up to the right upper quadrant and was referred to the back. She developed one severe attack of pain in the right upper quadrant, with nausea. These attacks continued frequently and generally followed hard work. There was very little tenderness during the attack and no fever that the patient knew of.

A few months before entering the hospital she had some burning and smarting on urination, but with no frequency during the attacks or at any time. Social history and family history were negative; physical examination was entirely negative except that the lower pole of the right kidney was palpable and slightly tender, but there was more

tenderness at McBurney's point and there was deep tenderness at the right costal margin, characteristic of cholecystitis.

We found the kidney to be slightly enlarged or at least slightly lower than it should be, and a little tender. She had possibly had repeated attacks of acute or subacute appendicitis, possibly gall-bladder disease, but she had not had typhoid, and she had never been pregnant. She was not entitled to have cholecystitis. The attacks of appendicitis were not characteristic; there was no vomiting; there was no severe pain; and the pain did not last long enough. There was no tenderness following it. Therefore you would figure, "Well, maybe these symptoms are better explained by the kidney rather than the appendix and gall-bladder."

On examination we found nothing abnormal in the urine. It showed no albumin, no sugar; examination with a microscope was negative; no pus, no red cells, no casts. Repeated examinations were made and showed nothing abnormal in the urine.

The point I want to make in a case like this is that normal urine does not necessarily mean that the kidney is not the cause of the trouble. You may have repeated examination of the urine and never find anything abnormal. We are too apt to say normal urine, and that rules out the kidney. Therefore in these cases a cystoscopic examination is always made.

Dr. Alcock examined her and reported: "Pain produced by injecting the right ureter was similar to her attacks, and following it she had a pain like that she had following her acute attacks." The right kidney was a little low. There was a pronounced kink in the right ureter just below the pelvis and a very slight degree of hydronephrosis. The patient was given a kidney belt to wear and it relieved her symptoms permanently.

The point I think of value here is that we are very careful about diagnosing appendicitis except in the absence of characteristic attacks. This patient should not have had cholecystitis. Some young people do, without having had typhoid or other causes, but it is very unusual. Besides that she did not have any of the other characteristics of cholecystitis. Therefore the kidney condition was suspected even in the presence of normal urine. The urinalysis was repeated frequently. There is a source of error here, however. You may get a return from the genito-urinary surgeon who examines the patient, saying the pain was repeated when he injected the ureter, or when he put a little tension on the pelvis the pain was repeated and the patient said, "That is similar to the pain I have been having," and jump to the conclusion it is the kidney. We ignore that. We require something more than that before we make the diag-

nosis that the kidney is at fault, because in most patients, if you inject the pelvis of the kidney enough to produce a little tension, they will have a rather severe pain, and are likely to say, "Yes, that is the pain I have been having; it is even a little worse." We do not take that as meaning anything. We are very slow to consider a narrowing of the ureter as the cause of the pain.

When we get evidence of a slight hydronephrosis, if the pelvis contains a few centimeters extra and the x-ray shows the calices are a little blunt, we think we have enough evidence and we should treat the patient with a kidney belt rather than an exploratory operation. Our results have been very gratifying and I think have saved a good many of the patients from unnecessary exploratory operations.

NASAL AND ORAL HEMORRHAGE ASSOCIATED WITH PURPURA HEMORRHAGICA

CLARE V. LAWTON, M.D., Grinnell

Epistaxis or hemorrhage from the nose or from the oral cavity is not as a rule difficult to control and keep dry after treatment. In general, when epistaxis occurs it is in connection with some of the acute infections of the head, with hypertension, especially where there is a sclerotic condition of the arteries, and with trauma. The trauma may be from blows, from picking the nose, or in cases of malformation of the septum, from a break or ulcer on the exposed part, caused by dust or other particles in air passing through. Nearly all spontaneous hemorrhages from the nose arise from the bleeding vessels in the anterior lower part of the septum just inside the vestibule, known as Kiesselbach's area¹. Excluding the bleeding due to fractures and similar causes, nearly all yields to some type of cautery, either actual or chemical, such as the chromic acid bead made by holding a heated silver probe in the crystals; trichloroacetic acid, full strength, and silver nitrate. When due to malformations of the septum a submucous resection or some type of septal operation is needed.

Hemorrhage from the nose or oral membranes in connection with purpura hemorrhagica, of either the primary or secondary type, presents a difficult problem. The blood dyscrasia so changes the blood tissue that the bleeding may be most intense and persistent. Primary, or the better name, essential thrombopenic purpura, as given by Clough², is a condition characterized by bleeding from the mucous membranes and purpuric eruptions, associated with a marked reduction in blood platelets and a disturbance in blood coagulation. The time of the coagulation is not changed, but the

clot is non-retractile, a feature found only in this particular disease. Minot³ says that the reduction of the blood platelets is responsible for the change. The normal count is from 225,000 to 350,000 per c.c. and whenever the count falls below 60,000 the purpuric condition sets in. Another factor is that there is as a rule no break in the continuity of the mucous membrane, but the bleeding is by diapedesis as the red blood cells take an amoeboid action. Symptomatically, the condition also occurs in connection with other diseases, the most common of which are: severe intoxications, such as benzol and arsenic poisoning; severe infections, such as typhoid, or diphtheria; antiphylactic shock; acute leukemia; or aplastic anemia. It is interesting to note that it does not occur in connection with pernicious anemia.

Whether the disease is of the primary or secondary type, nasal and oral hemorrhage is found in practically every case. In a perusal of fifty cases⁴, little could be found in reference to means of controlling the hemorrhage, yet all authors complained not only of its inconvenience, but also of its detrimental effect on the patient, because of the loss of blood. Three recommended nasal packs and packing between the gums and teeth, since this is the chief site in the oral cavity. In the primary type, blood transfusions control it for about three days and then it will begin again. In the symptomatic form the blood transfusion has but little effect.

During the last half year two patients have come to us for aid. The first was a farmer, aged sixty-two, who four weeks before had observed some red bruised spots on his arms and legs, but did not seek medical attention until two weeks later, when he was given a course of treatment as a tonic. When the patient entered the hospital, his body was covered with petechial spots, his left nostril was bleeding profusely and his gums were swollen and bleeding from the gum margins. His past history stated that he had been healthy all his life, except that his teeth had been bad for a long time and he was subject to colds. Examination of the head showed the eyes and ears to be negative. There was profuse hemorrhage from the left side of the nose and a large clot in situ which filled the cavity. It was removed and observed for several hours and did not retract. The bleeding was confined to the septal wall and no break was observed except a small one in Kiesselbach's area which looked as though it might have been made by the patient. The hemorrhage came from a large area back of this and was by diapedesis. There was considerable mucus and pus coming from the posterior sinuses and he must have had a chronic suppurative condition there of more or less consequence. The oral cavity showed large

petechial spots in the roof of the mouth, with blood oozing from the gum margins. There were some purpuric areas on the body. Reports of laboratory tests were as follows: red cells, 3,050,000; leukocytes 6,900, with no change from normal in the differential count. Coagulation time was two minutes, and bleeding still persisted after two hours. The clot was non-retractile. The urine was negative. We had no satisfactory count on the blood platelets. The hemoglobin was 60 per cent.

To stop the bleeding, the clots were removed and the break in Kiesselbach's area was cauterized with trichloroacetic acid. This controlled the bleeding in this particular area for a few minutes, when it started again. An adrenalin dressing was then packed in firmly and for about two hours the nose remained dry, after which the blood began to come through the pack as freely as ever. On removal it was observed that a slight abrasion caused by the pack seemed to enhance the bleeding. Adrenalin was then applied freely and the bleeding stopped. An adrenalin spray was supplied and the nose was sprayed freely every two hours. This controlled the bleeding quite well for about seven days, when it again became profuse. A pack well covered with vaseline was then placed firmly in situ, which controlled the bleeding. In twenty-four hours this was changed and a new one inserted.

The patient died fourteen days after admission. The internist's diagnosis was purpura hemorrhagica. General treatment consisted of supportive measures and the hypodermic injection of hemostatic serum, but the latter seemed to have no effect. It seemed that the bleeding was best controlled by a mechanical obstruction, first by contraction of the vessels with the adrenalin and then by pressure with the vaseline pack.

The second patient was a man aged seventy-two who had been under observation since August, 1930, for a blood dyscrasia, but not until about March 15, 1931, was a diagnosis made of aplastic anemia. At this time he began to have severe nasal and oral bleeding. Examination of the nose revealed blood coming through the septal walls on both sides by diapedesis. There was a small break in the lower part of the septum where the patient had picked his nose. The nasal cavity was filled with non-retractile clots. The red cells were 1,940,000. On February 20, 1931, the hemoglobin was 45 per cent. On March 24, 1931, the red cells were 1,850,000, white cells 14,000 and hemoglobin 35 per cent. The patient showed a much weakened condition. There were a few petechial hemorrhages under the skin.

To control the nasal bleeding, trichloroacetic acid cautery was again tried but it was of no particular avail. Adrenalin packs were inserted and the nose remained dry for about three to four hours. They were then changed and the loss of blood was kept fairly low. The dentist who watched the bleeding from the gums used a thromboplastin pack. This was packed in very tightly and the pressure, as well as the thromboplastin, aided in checking the bleeding. The patient, however, insisted on doing a certain amount of his executive work and because he objected to the packs, an adrenalin spray was used every two hours, which kept the bleeding in control fairly well. He died April 1, death being due to the degenerative changes in the heart muscle.

These two cases represent the two types of purpura. In both cases the bleeding was symptomatically the same. In neither case did the internist wish to do a blood transfusion although the hemostatic serum was used. From the literature it would seem that blood transfusion gives the best results in the primary type³. It is not very effective in the symptomatic type. In either form it is a problem to control the nasal bleeding and we must look to the rhinologist to take care of it. It seems to me that there must be some means of causing the arteries to be kept so closely contracted as to prevent diapedesis of the red cells, or of packing the nose firmly enough with a pack impervious to the blood serum so that it cannot ooze through, thus actually damming the blood flow.

Discussion

Dr. Rollin W. Wood, Newton: In reviewing the essayist's paper I feel he has covered the subject very well from the standpoint of the rhinologist. It is a subject which I consider extremely difficult, due to the fact that it is really a complication and in many instances an extreme emergency, occurring as it does, during the course of a truly general condition, at which time the rhinologist is called on for help only because of the location of the bleeding.

Essential thrombopenic purpura is a condition characterized by the extravasation of whole blood into the skin and mucous membranes with the following blood picture present: the absence of any change in the red cells, with a varying change in the leukocytes, a marked reduction in the blood platelets, normal coagulation and a definitely increased bleeding time. The clot, when formed, is non-retractile.

The bleeding takes place because of the extreme loss of blood platelets and a peculiar action of the blood on the cells of the capillary walls which permits the extravasation of the blood through them. However, this same action is not apparent on the larger vessels, thus making surgery possible in the severer cases where a splenectomy is indicated.

Purpura hemorrhagica occurs in many diseases, as was noted by the essayist, but he also stated that it does not occur in pernicious anemia. In reviewing considerable literature on this subject I found pernicious anemia quoted quite frequently as a cause of the condition in question. At the present time I have under observation, in conjunction with an internist, a patient of this type who has had two attacks of severe bleeding from the gums and nose within the past six weeks. He has been diagnosed and treated for many months as a pernicious anemia patient and at present has all the findings, even to the cord changes, of a well advanced case.

If a patient presents himself to us primarily for the treatment of a persistent nasal hemorrhage, I feel it is up to us to differentiate between an essential purpura or a hemophilia, granting of course that injury, ulcerations, or any of the common causes of epistaxis have been ruled out. This persistent bleeding of the mucous membranes may precede any other manifestation of a purpura. In any case, the diagnosis is based on the laboratory findings. In the purpura we have blood that clots within the normal time and a clot that is not retractile, the bleeding time is greatly increased, and there is very little change in the cellular structure of the blood, with the exception of a marked reduction in the number of blood platelets; while in the hemophiliac, we have a blood that shows practically no change in the cells and number of blood platelets as compared with normal blood, unless there has been considerable bleeding, but we do have a greatly increased clotting time, with a normal bleeding time, and a clot, when finally formed, that is retractile. The amount of bleeding, of course, will vary the cell count.

In dealing with such cases it is difficult to determine any particular treatment. Many drugs and methods of treatment have been suggested, but inasmuch as purpura hemorrhagica is often a self-limited condition, I feel that many times a certain treatment is given undue credit for a cure, when possibly some other method would have been equally successful.

The treatment most commonly used, especially in the milder cases, is the local application of some one of the styptics or thromboplastic substances, either with or without packs, together with injections of the latter. Perhaps a more satisfactory treatment is the intramuscular injection of either citrated or whole blood, 10 to 20 c.c. daily, until bleeding is under control. In the more severe types, blood transfusions are indicated and in the chronic type, splenectomy has proved very successful. Whichever method is used, the general hygiene of the patient, absolute rest and a well balanced diet must not be overlooked, granting you are already treating the primary etiology.

THE RISING MORTALITY FROM APPENDICITIS

ANATOLE KOLODNY, M.D., Sioux City

The mortality from appendicitis is steadily increasing, notwithstanding the unusual clarity of the pathology and of the treatment of this disease. This rising mortality has attracted wide attention in medical literature during the last year or two. However, the measures and plans advocated by the various authors for its reduction have been directed mainly to the laity; very little space indeed has been given to constructive criticism of the work of the physician himself.

The factors influencing the mortality from appendicitis may be reduced to two: the delay of operation, and the incompetency of the operating physician. The importance of delay as a factor in the increase of the mortality from appendicitis is well known. It is clearly seen from the vital statistics of the Bureau of Census for 1929¹. The states with the largest mortality from appendicitis are the same states in which the number of physicians per given area is the smallest. Thus, in Nevada, with 846 square miles to each physician, the mortality was 31.1 per 100,000 population; in Wyoming, with 422 square miles to each physician, the mortality was 29.6; in Montana, with 292 square miles to each physician, the mortality was 26.4; in Colorado, with 58 square miles, the mortality was 24.5; in Utah, with 161 square miles, the mortality was 23.8; and in Idaho, with 214 square miles, the mortality was 21.2 per 100,000 population. However, one should not draw from this a conclusion that the larger the number of physicians in a given area, the less the mortality from this disease; for example, in the District of Columbia, with thirty-two physicians to each square mile, the mortality for 1929 was 20.9 per 100,000 population.

It is probably correct to say that the public is just as responsible for the delay as is the family physician. It is not the entirely ignorant patient who insists upon a delay of the operation against the advice of the physician; it is the half-educated one who is opposed to operation, until he is certain that the "spell" cannot be warded off by an ice-pack, a hot-water bottle or even a purgative. In medicine, as in many other fields, half-knowledge is worse than none.

When the patient is not at fault, the delay by the attending physician is most always due to inability to make a diagnosis. Such a delay is usually clothed in the scientific term of "expectant" or "conservative" treatment. After hours or days of waiting, when the physician is finally put face to

face with a perforated appendix and peritonitis, he attempts to justify himself in his procrastination by falling back on the authority of Ochsner, entirely ignoring the fact that Ochsner suggested his expectant treatment only in cases of advanced peritonitis that resulted from appendicitis.

The danger of delay in appendicitis lies in the fact that it changes the nature of the disease. There is hardly another surgical disease in which the difference between its incipient stage and its advanced stage is so great as in appendicitis. This is not realized by the public and frequently not by the practitioner. The ease and the impunity with which an incipient appendicitis may be handled by a novice in surgery leads many to believe that the same man is prepared to deal with the most complex problems of an advanced appendicitis. This brings me to the second cause of this rising mortality,—the incompetency of the operating physician.

There are old truths about advanced appendicitis that have never been assimilated by the casual surgeon, such, for example, is the fact that there are cases of appendicitis in which immediate surgical intervention is meddlesome, as Wilkie mildly expresses it². A widely spread erroneous idea is that the appendix must be removed in whatever stage appendicitis is tackled by the surgeon. The casual operator does not realize that it is poor and reckless surgery to go hunting after an appendix that is buried between inflamed, sticking-together intestinal loops. He is not familiar with the fact that breaking up of protective adhesions in the presence of a palpable lump, but without constitutional disturbances, is ill-advised surgery. He is not impressed by the fact that simple drainage of an appendiceal abscess is better surgery than an attempt to "shell-out" the gangrenous appendix.

The stumbling block of many an inexperienced surgeon is a misunderstanding of the dictum of Murphy, of the necessity to "open the abdomen as quickly as possible and close it more quickly." When Murphy expressed this idea, it was aimed at cases of general peritonitis and not at cases of appendicitis with a localized inflammation. Surgical intervention in advanced appendicitis may be an extremely tedious procedure and may require great diligence, patience and care on the part of the surgeon. It is obvious that to apply Murphy's dictum in such cases would mean to run a risk of carelessly breaking up the numerous fine, protective adhesions and, in such a way, of contributing greatly to the generalization of the local peritonitis.

Fallacious and pregnant of serious danger is the fetish of small incisions still greatly in vogue with many practitioners. It has been well proved by

experience that long incisions, allowing good exposure and free approach, are much safer than the small incisions, when a great deal of traction is necessary and when the most delicate part of the operation, that of freeing the diseased appendix, is inadvertently made blind and unsafe. The edematous, gangrenous appendix will easily burst in cumbersome attempts to deliver it blindly through a "button-hole" incision.

Indiscriminate drainage of the peritoneal cavity is another error that contributes greatly to post-operative obstruction and mortality. It is an accepted fact that draining the peritoneal cavity after an appendectomy, when only a cloudy protective fluid is found at operation, inhibits the defense reaction of the peritoneum. In such cases the patient makes a better recovery when the abdomen is closed tightly, and postoperative obstruction is much more frequent in drained than in undrained cases. The casual operator takes no pains to discriminate cases which need to be drained from ones in which drainage is definitely harmful: it is easy to see his point—it is better to take a chance with a drain when it is not needed than without one when it might be necessary. This is a lazy attitude and should be condemned.

The annual loss of life in the United States from appendicitis is about 20,000. This gives the highest ratio per population of any of the civilized nations on earth. The relative frequency of death from appendicitis in this country was 11.4 per 100,000 in 1910, 13.4 in 1920, 15.2 in 1929 and 18.1 in 1930. The average age at death in 1930 was 32.4 years. The victims of appendicitis die at a more productive age than the victims of tuberculosis (36.8 years), of cancer (60.7 years), of nephrosis (62.2 years), or of heart disease (64.7 years).

In studying the mortality from appendicitis in the leading cities of the United States³, one sees that it varies from 59 to 1.9 per 100,000. The three cities with the highest mortality in 1930 were Oak Park, Illinois, 59; Lexington, Kentucky, 58.9 and Sioux City, Iowa, 54.2; while the three cities with the lowest mortality were Fresno, California, 1.9; Orange, New Jersey, 2.8, and Akron, Ohio, 3.5.

The mortality rate from appendicitis in this country is far in excess of that in other civilized countries. If we choose for comparison civilized countries with approximately the same climate, we see England and Wales with a mortality of 7.3 per 100,000; Scotland, 9; Germany, 9; with the rate for Prussia, 6.8, and Italy, 3.7. The same contrast is seen when we compare the mortality of our larger cities with some of the larger cities

abroad, for which the figures are available. So, while Chicago had a mortality of 19.6; Detroit, 20.3; New York City, 15.6, and Philadelphia, 14; Mexico City had a mortality of 9.6; Tokyo, 6, and Moscow, 5.2, per 100,000. The figures are less contrasting when we compare the American rates with those of Canada, where the conditions must be about the same; the Canadian rate shows 14.6 in 1928, increasing to 14.8 in 1929. The figures vary greatly and they are as high as 22.5 for Alberta and as low as 9.1 for Nova Scotia. This variance suggests the difference mentioned above between the mortality in our mountain states and eastern states.

If one were to consider delay as the only cause of the increasing mortality from appendicitis, it would be impossible to explain the contrast between the mortality in this country and that in Europe. Human nature is about the same everywhere and the average person is nowhere enthusiastic over undergoing a surgical operation. One must admit that there is another factor which is at least as important as delay, if not more important, that brings about this enormous difference in the mortality. This factor is the incompetency of the casual operator in America in dealing with the difficult problems that arise in advanced appendicitis. This is a factor of foremost importance in this country, but not in Europe, where most of the surgical work is concentrated in the hands of master surgeons.

Dr. Robert T. Morris says in his forthcoming book, "My Fifty Years in Surgery"⁴: "Why should the death rate from appendicitis per hundred thousand inhabitants be 2.9 in Italy from 1921-1928, but in our United States a bad 13 in 1918 and a worse 18 in 1930? In Italy the surgical work for appendicitis is in the hands of masters, in our United States we have masters equally fine, but the majority of the appendicitis cases are not in the hands of these men.

"The spirit of adventure in experimental therapeutics has now carried us far past the pivotal point into diminishing returns in both medical and surgical parts of appendicitis work. Go back to the first ten years of the present century. Get old reports published by surgeons of that day and find if some of them did not have an appendicitis death rate of two or three per cent in series of cases by the hundred. Find a death rate of fifteen per cent now in reports upon cases of the same class and thereby find a startling explanation for 'startling' increase in appendicitis deaths."

One could argue against the value of comparison of the appendiceal mortality in America with that in other countries because of a possibility that this disease is decidedly less common else-

where than in the United States; or, one could say that here many patients die without hospitalization or operation. However, such arguments are not tenable, since the infrequent investigations of the *operative* mortality rates also show that these rates are much higher here than in other countries. In Philadelphia, reputed to be the leading medical center of the United States, the operative mortality is 7.35 per cent and is based on 5,121 cases of acute appendicitis, treated in twenty-seven Philadelphia hospitals, while in the Leeds General Infirmary in 1924 and 1925, out of 1,080 cases of appendicitis 3.7 per cent died.

Bowers⁵, studying the operative mortality from appendicitis in twenty-seven Philadelphia hospitals, reached an important conclusion: "The mortality from appendicitis decreases with the experience of the surgeon. There is no disorder of the human body in which surgical judgment influences the outcome so frequently or so markedly as in general peritonitis." In the same hospital in Philadelphia, at the same time, one surgeon showed a mortality of 20 per cent, another one 3.3 per cent, while several surgeons had no mortality. The exaggeration of the importance of delay is seen from Bowers' statement also: "If one analyzes the hospitals that had the lowest mortality, it will be found that there the number of perforations resulting in a general peritonitis is correspondingly low."

While the public is responsible for a large share of its own death rate from appendicitis because of delay, the incompetency of the operating surgeon is responsible for the balance of it. The number of practicing physicians, with only meager surgical experience and even less surgical judgment, who "do their own surgery," is steadily and rapidly increasing. It is only natural that this should lead to a constant increase of the mortality from this disease that is commonly considered by the uninitiated quite a simple disorder. The truth of this conclusion is well seen when we compare the operative mortality from appendicitis with that from goitre operations. The laity and the medical profession are used to considering the operation for goitre as one of tremendous risk and yet throughout the hospitals in this country, this operation is one of the least dangerous of the major operations. In appendectomy just the reverse is true. Few of the physicians operating for appendicitis will actually tackle a goitre.

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CANCER AND HYDROCHLORIC ACID*

A Preliminary Report

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It is commonly known that cancerous stomachs generally produce little or no hydrochloric acid and that hypochlorhydria frequently occurs in cachectic patients. It is generally believed that the lack of acid results directly from the local disturbance in the stomach, or that it is secondary to the cachexia. The unpleasant nature of gastric study has precluded its routine use in clinical and scientific investigation, except in those cases whose symptoms directed attention to the stomach. The frequent finding of hypochlorhydria in patients with malignant lesions, other than gastric, led the writer to believe that carcinoma might be a deficiency disease. Pursuant to this idea, my patients were given, with encouraging results, large quantities of hydrochloric acid, liver extract, ventriculin, codliver oil and ultraviolet irradiations, together with foods rich in calories and vitamins. Clinical observation seemed to prove hydrochloric acid the remedy of choice. This treatment simply follows the path of logical conclusions and is supported by case records and recent literature.

Case 1. Mrs. R. J., white, aged fifty-five, was married and had three children. Examination April 26, 1929, revealed a nodular mass in the left breast, which was adherent to skin. The patient admitted knowledge of its presence for many months, approximately ten. Radical amputation of the breast was performed May 5, 1929. Extensive glandular involvement was present in the axilla. The diagnosis was scirrhus carcinoma, the prognosis unfavorable, the outlook discouraging. X-ray therapy followed. On September 30, 1930, gastric analysis (following an Ewald meal) showed free hydrochloric acid 15, total acidity 39. The patient's course was checked while she experienced a gradual decline in energy and weight, dropping from about two hundred to less than one hundred thirty pounds. Examinations made October 8, 1931, revealed a mass in the right breast. Pelvic examination showed a "frozen pelvis," induration and massive growth in the broad ligaments, particularly the left. The pelvic glands were enlarged, the uterus immobile. Blood examination showed leukocytes 5,700; erythrocytes 3,570,000; hemoglobin 60 by Tallqvist's scale. Gastric analysis, following an Ewald meal, was: free hydrochloric acid absent, total acidity 9, no blood. The diagnosis was malignancy, with extensive metastasis in opposite breast and pelvis. The treatment instituted consisted of hydrochloric acid

20 to 30 drops, increasing as tolerated, plus symptomatic treatment.

Upon re-examination of this patient, January 11, 1932, the mass had disappeared from the right breast and the pelvic examination revealed a mobile uterus, due to marked recession of broad ligament involvement. A patient who was rapidly declining on October 8, 1931, has improved and gained slightly in weight.

Case 2. Mr. C. E. W., white, aged seventy-nine, was first seen November 12, 1929, complaining of weakness, nervousness, loss of fifteen pounds in weight in three or four months, distress, and distension in epigastrium. He had no acute pain after eating, but the stools were black at times. Blood examination showed white corpuscles 5,650; red corpuscles 4,010,000, hemoglobin (Tallqvist) 75 per cent. Gastric analysis following an Ewald meal, November 13, 1929, showed free hydrochloric acid absent, total acidity 7, no blood. Fluoroscopic examination revealed a filling defect on the greater curvature. Upon the foregoing evidence, a diagnosis of carcinoma was made and the family so advised.

The treatment consisted of hydrochloric acid in increasing doses. His symptoms gradually disappeared. He has gained twelve pounds, looks well, and enjoys life. Such gratifying results led us to believe that our original diagnosis had been in error.

Case 3. Mrs. T. E. M., aged fifty-four, was married and had five children. The first examination, December 12, 1931, revealed a slightly nodular lump in the right breast and dimpling of the skin external to the nipple. This was first noticed by the patient in June, 1931. Biopsy and pathologic examination showed scirrhus carcinoma. Radical breast amputation was performed December 31, 1931, and revealed axillary gland involvement.

Blood count just previous to operation showed white corpuscles 4,950, red corpuscles 4,000,000, hemoglobin (Tallqvist) 70 per cent.

Interest in this subject prompted a gastric analysis, with an Ewald meal, on leaving the hospital, which showed free hydrochloric acid absent, total acidity 10.

Treatment consisted of dilute hydrochloric acid minims 20 to 30, three times daily.

Our records, in addition to the above, contain proved cases of advanced malignancy of the head of the pancreas, of the rectum and bowels, and of the skin, all without involvement of the stomach, and all with definite hydrochloric acid deficiency. The latter occurs too often in malignant disease to be merely coincidental.

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Recent observations at the Cancer Research Laboratories, University of Pennsylvania Graduate School of Medicine, indicate that the average pH of untreated cancer patients is more alkaline than normal and that the degree of alkalinity is closely related to the prognosis of the disease, i. e., the greater the alkalinity the shorter the term of life. McDonald and Reding have pointed out that the alkalinity is more pronounced in internal cancers than in those involving the skin. They also draw attention to the effect of treatment, particularly radiation, on the pH of the blood and suggest the possibility of using the pH of the blood as a check upon the effectiveness of treatment.

Possibly the altered blood plasma pH explains the frequent hypochlorhydria in cancer cases and the administration of acids produces its beneficial effects by reducing alkalinity.

Willy Meyer, of New York, in his recently published book on "Cancer," attempted to show by means of a survey of the literature that for inoperable cancer acidosis is the given remedy. The same author, in his article, "The Acidosis Treatment of Inoperable Malignant Tumors," described a further method of producing acidosis for therapeutic purposes. The method has been worked out experimentally and applied clinically by B. Fischer-Wassels of Senckenberg Institute of Pathology at the University of Frankfurt, Germany. Its principal features are: breathing for two to four hours daily of pure oxygen, plus four and one-half per cent carbon dioxide combined with x-ray therapy; the administration of large quantities of hydrochloric acid three times daily; and when indicated, ultraviolet irradiation of the entire body for the purpose of activating the reticulo-endothelial system.

The study of gastric secretion in its relation to all malignancies and neoplasms may shed valuable light upon their etiology. Hypochlorhydria and achlorhydria are often overlooked in handling patients suffering from cancer. These cases, whether inoperable or postoperative, derive great benefit from the administration of large doses of hydrochloric acid. Such treatment is not only constructive and palliative, but offers hope of partial or complete immunity to the disease.

In presenting these clinical observations it is not the purpose of the author to discuss, or attempt to explain the remote biologic processes involved. We are, however, dealing with biologic phenomena and must not forget that "many roads lead to Rome." Possibly there is merit in the "acidotic treatment." Our present necessity is that clinicians focus attention on the subject and give the method

wider trial. Such coöperation alone can bring us forward quickly.

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ENTEROSTOMY AS A LIFE-SAVING MEASURE*

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In any acute abdominal surgical condition, the first essential to its cure is the removal of its cause. For instance, if it is due to a perforation of some viscera, the perforation must be closed; if to a diseased appendix, the appendix must be removed.

Second, adequate drainage must be established. When modern surgery was new, surgeons sought to establish drainage by draining locally, but any surgeon knows now that such drainage is in most cases inadequate. The first great advance in surgery of acute abdominal conditions was to drain the pelvis with a large tube through a suprapubic stab wound and then put the patient in bed in Fowler's position; that is with the patient's head about twenty inches higher than his feet, regardless of the location of the suppurating condition in the abdomen. This allows all fluids in the abdomen to flow into the pelvis and thence out of the tube. The only time that local drainage should be used is when the suppurating point is walled off from the rest of the abdomen. For instance, when there is a well walled-off abscess of the appendix, the simple introduction of a tube into the abscess is all that should be done, but if you have opened the abdomen and find an abscess not in contact with the abdominal wall and you break the walls of the abscess, you must remove the appendix, at whatever cost in time or trouble, and drain the pelvis.

This procedure is often abused, however, by keeping the patient in the Fowler's position for a week or ten days. That is very uncomfortable to the patient and is not good treatment. The drainage of fluids into the pelvis all takes place within a few hours, and any patient kept in the Fowler's position longer than thirty-six to forty-eight hours is being unnecessarily punished. Even the drainage tube should be removed at the end of that time in almost all cases. The only exception is when there is a free discharge of thick pus,

* Presented before the Austin Flint-Cedar Valley Medical Society, Clear Lake, July 15, 1931.

and even then the large tube should be removed and a smaller one substituted because a large tube tends to cause pressure necrosis and a fecal fistula.

Next to the removal of the cause of acute abdominal surgical conditions and adequate drainage, the greatest life-saving measure is enterostomy, the draining of the gut itself. Enterostomy is not new. Renault performed an enterostomy in 1787 and Neleton revived the procedure in 1840. Ever since Neleton's time, enterostomy has been known as a life-saving measure, but it never was popular except in rare cases because of its after-effects. The only method known was to suture the gut to the peritoneum or to the fascia, or even to the skin and then either at once or preferably after several hours, open the gut. That kind of an enterostomy is always followed by a permanent fecal fistula requiring a second operation for its closure. The operation for closure

it should be. Many patients who could be saved by this simple procedure lose their lives.

The method I use is simplicity itself, and I have used it for over fifteen years. First, I perform whatever operation is necessary, then draw down a considerable fold of omentum into the wound and fold it back on the abdomen above the upper angle of the wound; select a loop of jejunum high enough to be above any distended gut, if possible, but never closer than three feet below the beginning of the jejunum at the ligament of Treitz; apply two intestinal clamps to the gut about five inches apart, after pressing all the gas and liquid out of the portion between the clamps; insert a small purse-string suture, not over half an inch in diameter, of plain catgut opposite the mesentery; make a tiny puncture in the center of the purse-string with the point of a small knife into the gut; through this puncture introduce a small blunt

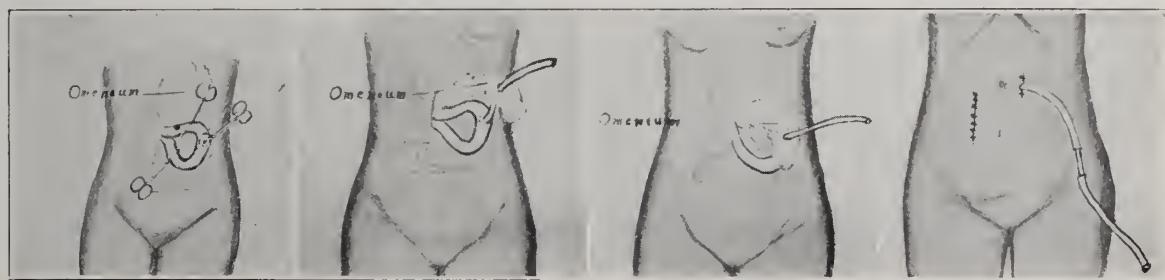


Fig. 1

Fig. 1. Loop of jejunum brought out; intestinal clamps applied, purse string in place; gut punctured; puncture being enlarged with fine forceps.

Fig. 2

Fig. 2. Enterostomy tube introduced and passed through a fold of omentum.

Fig. 3

Fig. 3. Omentum brought snug to gut.

Fig. 4

Fig. 4. Jejunum returned to abdomen and enterostomy tube brought out of the abdomen through a stab wound.

was frequently a failure, and was formerly associated with a high death rate. We know now how to close such fistulae with comparative ease and certainty and with practically no fatalities. The closure is accomplished in this way: a new incision is made two or three inches from the fistula, the fistula and the contiguous gut are dissected free from the abdominal wall and brought out of the new incision, then the fistula is closed by whatever means is necessary. Usually cutting away the scar tissue around the fistula and suturing it will be sufficient, but it may be necessary to resect the gut and make an anastomosis. After the closure is made the gut is dropped back into the abdomen, making sure that the repaired portion is far removed from the site of the previous fistula. An enterostomy properly performed will always close spontaneously. I have completed some hundreds of them without a single failure of the fistula to close itself. Enterostomy is a procedure used mainly in the middle west. In the east and in the far west, it is seldom used, and even here it is not used to nearly the extent that

hemostat and spread it in several directions so as to make a round hole in the gut the same size as the tube I intend to use. I use a soft, pure gum tube the size of a lead pencil which I have previously prepared by cutting one end into a fish-tail shape with two fenestrae just above the fish-tail; next insert the fish-tail into the hole stretched in the gut far enough so that both fenestrae are inside the bowel, draw up the purse-string and tie it, then pass the same needle that was used to put in the purse-string, through the side of the tube and tie again; next bring down the omentum, pass a hemostat through it and grasp the free end of the tube with the hemostat and draw the tube through the omentum until the omentum is in contact with the gut, pucker the omentum up until there is a thick wad of it close around the tube and against the gut and hold it there with a loosely drawn purse-string of catgut; then make a stab wound at some convenient place two or three inches from the operation wound and pass the enterostomy tube out of the abdomen through the stab wound, being sure that the omentum and

gut fit snugly to the stab wound on the under side of the abdominal wall, and the enterostomy is complete.

I use the fish-tail tube because it does not become obstructed as readily as an obliquely cut tube. The oblique side is likely to rest against one side of the gut and then any little particle of solid matter will obstruct the fenestrum in it and there will be no drainage. I use a sniall purse-string because if a larger one were used, too much of the bowel will be turned in with the purse-string and a lessening of the lumen of the gut result. I use plain gut because one wants the tube to remain in the gut only a few days. If it does not do its work in four or five days, it never will, and plain gut will last that long. I make a puncture in the gut and stretch it with a hemostat because if an opening were made with a knife, it would be a slit and not fit the tube, and besides a hole made with a knife will nearly always be too large. I pass all sutures that I use to secure the drainage tube, through the side of the tube, never through the center, because if it were passed through the center, any particle of solid matter trying to get out of the tube will almost certainly be obstructed when it reaches the suture. I pucker the omentum thickly around the tube because when the tube drops out, which will be after four or five days, the thick wad of omentum closes the opening in the gut. This is the reason that all these enterostomies close themselves and do not leave permanent fecal fistulae.

Most surgeons, when they make an enterostomy, even though they use the tube and pass it through the omentum, use a method similar to that of Weitzel; that is, they make a slit in the gut and introduce the tube through the slit and then infold the tube about one and one-half inches by suturing the walls of the gut over the tube. This has several objections. First, it materially lessens the lumen of the gut and thereby permits drainage from only one side of the tube; second, it is necessary, in using this method, to determine the direction of the flow of the intestinal current, to be sure that the tube is placed so as to drain the proximal portion of the gut. Now it is just as necessary to drain the distal portion as it is to drain the proximal portion. By using the method I have described, it is not necessary to try to find the direction of flow in the gut because it will drain from one side as well as from the other.

Much has been said as to where in the bowel the enterostomy should be made. Most surgeons advise placing it high up, but I put it as low as possible just so as to get it above any distended bowel that may be there, and never higher than three feet from the beginning of the jejunum, be-

cause as large an amount of jejunum as possible is needed for absorption. The portion below the enterostomy is useless for that purpose, because any food or water taken by mouth will flow out as soon as it reaches the tube and never reach the distal portion. Also, if the drainage is placed too high, the pancreatic and gastric juices are little changed by the time they reach the enterostomy. That makes no difference so long as the enterostomy tube is still in place, but after it has dropped out, those juices attack the skin on the abdomen and erode it and produce a very sore, raw abdomen, tending to keep the fistula open.

An enterostomy does a good many things that nothing else will do. First, it very rapidly drains out any toxins that may be in the intestine. Second, it allows fluids and gases in the bowel to escape and so prevents distention or reduces any distention that may be present. Third, it allows the gut distal to the enterostomy to rest, so that if peritonitis has begun, the rest permits recovery if it is not too far advanced, and if peritonitis has not begun, there is little chance for it to start. Fourth, it allows the immediate giving of water. There is an exit for gas and for fluids and usually the patients do not vomit from taking water. Fifth, it allows the immediate pouring of liquids into the bowel at the place where absorption is most active; namely, the jejunum. I always order that a pint of water be poured into the jejunum through the enterostomy tube every hour, beginning one hour after the operation. For this I use plain tap water, believing that boiling the water drives off much of the free oxygen and other gases and that unboiled water is the best. Also on occasion, I have glucose solution poured in through the tube or diluted whisky or black coffee or peptonized milk or other nutrient solutions, instead of using nutrient enemas. Most of the water that is poured in the tube siphons out, but that washes out the toxins in the gut and keeps up good drainage, and some of the water is absorbed. When nutrient or stimulating solutions are used, they should be poured in in small amounts and the enterostomy tube clamped for half an hour or an hour to permit their absorption. This procedure obviates the necessity for subcutaneous injections, intravenous injections, retention enemas or Murphy drip.

As soon as the patient is returned to bed, a long tube is attached to the enterostomy tube and the free end put in a bottle under the bed, so that it will siphon into the bottle. This long siphon is detached every time it is desired to pour any solution into the bowel and a shorter tube with a funnel on one end is attached in its place and the solution or water poured into the funnel.

Enterostomy has a great field of usefulness. I use it in all suppurating conditions in the abdomen when there is actual or threatened peritonitis; in all cases of ruptured duodenal ulcer, ruptured gall-bladder, septic appendix, or pelvic infection, when I also find evidence of peritonitis, distended bowel, or an inflamed, angry-looking bowel; also I use this method of enterostomy as a preliminary procedure when there is a malignancy to be removed later. After I have resected a gut and made an anastomosis, I perform an enterostomy a foot or two on the proximal side of it to keep the bowel from distending, for such distention endangers the suture line.

It is best to perform the enterostomy at the time of operation if there is any threat of peritonitis, but if peritonitis develops later, that is, after the operation, an early enterostomy will often save a patient who might otherwise die. For this kind of operation, it is necessary to make only a short incision, say two inches long, seize a tag of omentum, draw out a loop of gut anywhere, complete the enterostomy and bring the tube out of the abdomen in the same incision. This can be done in from five to ten minutes, and enterostomy during another operation should not take longer than three to five minutes.

If at operation I find great distention, involving several feet of intestine, I put in two enterostomy tubes several feet apart and bring the tubes out of the abdomen, either through the same stab wound, or one out of a stab wound and the other out of the operation wound, as the exigency seems to demand. When both colon and ileum are distended, I drain the colon through one tube and the ileum through another.

I know of only one objection to an enterostomy: it is probable that a patient who has had an enterostomy is afterward more likely to have an intestinal obstruction. However, I have had occasion to operate upon several patients for intestinal obstruction upon whom I had previously performed enterostomies, but in no one of them did I find the enterostomy to be the cause of the obstruction.

CLAUDE BERNARD'S THEORY AND REVERSIBLE COAGULATION RE- ACTIONS OF PROTEINS*

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The chemical and medical professions are more intimately related than is appreciated by the majority of either profession. Undoubtedly, the reason may be found in the differing activities of

the two. Let me, therefore, review a few instances in which the scientist has been the invisible helper of the medical profession in cases which heretofore seemed beyond help.

In 1922 Drs. Banting and Best of Toronto isolated insulin, the active principle of the ductless portion of the pancreas. Later, Dr. Abel determined its formula to be $C_{45}H_{69}O_{14}N_{11}S_3H_2O$. Synthesis is now possible, and its realization is in view.

Hormones of the thyroid and of the medullary portion of the adrenals have been isolated, identified, and both thyroxin, $C_{11}H_{10}O_3NI_3$, and adrenalin, $C_9H_{13}NO_{31}$ have been synthesized, giving medicine powerful, pure remedies.

Another brilliant achievement is that of Ehrlich in producing arsphenamin, after performing 606 experiments, covering two and one-half years of skillful work.

In this evening's paper we shall consider the work done by Dr. Wilder D. Bancroft,¹ professor of physical chemistry at Cornell University, in the development of Claude Bernard's theory, and its application in medicine.

The predominant theory of anesthesia has been the Overton-Meyer theory which assumed that an anesthetic is lipoid-soluble and that its anesthetizing power is connected with its distribution ratio between the lipoids and the blood. This theory, upheld by Clowes, has been questioned because it is not true that everything that goes into the brain cells through the lipoids is an anesthetic, making the theory a transport theory only.

About sixty years ago the eminent French physiologist, Claude Bernard, advanced the idea that anesthesia was due to the reversible coagulation of proteins in the brain and the sensory nerve. Bernard's theory met with strenuous opposition, which has faded in the light of recent colloid chemistry. This theory postulates that reversible coagulation of the proteins of the sensory nerves gives rise to anesthesia.

In order to convince biologists that this was the true hypothesis, Dr. Wilder D. Bancroft performed several experiments on living organisms. Young, vigorous cultures of baker's yeast were made in Laurent's medium with 1.5 per cent dextrose. Subcultures were made every twenty-four hours, the third subculture being used in the experiments. These yeast cells were examined under the ultra-microscope and photographed for record. The culture was then treated with the narcotizing concentration of 2 per cent amyl alco-

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Editor's Note: This article prepared by a layman, a professor of chemistry, is herewith presented since it indicates the necessity for medicine and chemistry to advance hand in hand, and in the hope that it will serve as a stimulus to others in allied fields to bring to us their researches and discoveries.

hol solution, and again placed under the ultra-microscope. After about ten minutes the movements of the colloidal particles slowed up perceptibly and a few minutes later Dr. Bancroft noticed a distinct flocculation, or coagulation inside the cells. Similar results were obtained with chloroform, ether, chloral hydrate, and paraldehyde. The narcotized culture was centrifuged, the supernatant liquid poured off from the cells, and fresh, sterile medium added. The cells were washed twice in this way and examined under the ultra-microscope. The material in the cells soon developed a slight Brownian movement, then the aggregates broke up into smaller particles and the motion became more pronounced. At the end of twenty-five or thirty minutes the motion of the colloidal particles became normal, thus showing the material to be completely peptized, and the yeast cells to be normal in every respect. If too much narcotic be added or if allowed to act for too long a time, the coagulation becomes more marked and cannot be reversed. The cell is dead.

If anesthesia is caused by the coagulation of the proteins in the brain and sensory nerves, one should be able to bring a patient out of anesthesia more quickly than would normally be the case by the administration of ephedrin or sodium thiocyanate, both peptizing agents, which cause the breaking up of the larger aggregates into smaller ones and then bring about normal colloidal movement. This hypothesis has been verified by Dr. Bancroft and others, since men, dogs, rabbits, goldfish and plants have been brought out of anesthesia more quickly by the administration of either ephedrin, or sodium thiocyanate.

The real test of a theory is its ability to account for new phenomena. Dr. Bancroft does this in a very striking manner when he shows that the theory of reversible coagulation of proteins is capable of coördinating all sorts of phenomena.

The assumption is made that there is increased irritability as the nerve proteins approach the point of instability and the beginning of reversible coagulation. Irritability, anesthesia, and death in case the coagulation becomes irreversible, would be the natural result in administering increasing amounts of anesthesia. It is well known that there is a period of irritability before anesthesia and after it passes off. Since strychnin has a stimulating effect in small doses and causes death when administered in larger amounts, it seemed to Dr. Bancroft probable that there might be a range of concentrations, perhaps very narrow, within which strychnin might act as an anesthetic. This was not very good reasoning, because strychnin kills usually with tetanic convulsions and also interferes with the oxygen metabolism. In spite of

this, the prediction in regard to strychnin was verified by Dr. Bancroft. A frog can be anesthetized very easily with strychnin because he can breathe through the skin. The frog will stay in a deep narcosis for several days. A dog, if given oxygen to minimize the unwanted action of the drug, can also be anesthetized with strychnin.

A law accepted universally by biologists, physiologists, and bacteriologists, that all depressor substances exert a stimulating effect when used at an appropriate dilution, is beautifully explained by Claude Bernard's theory. Two examples of this theory are cited. Professor Otto Rahn of the College of Agriculture of Cornell University found that if mercuric chlorid were administered in small doses or for short times, there was no apparent deleterious action. If larger doses were given or if a small dose was allowed to act for a longer time, a range of dormancy was observed. The bacteria could be aroused from dormancy by elimination of the mercuric chlorid. If the doses were still larger, the bacteria died. Since the test for the state of the bacteria was the rate of increase of the colonies, and since small doses gave a greater rate of increase of the colonies than the normal, this coincided with Dr. Bancroft's assumption.

Dr. M. J. Brown of the Roessler and Hasslacher Chemical Company called attention to the effect of hydrocyanic acid on the eggs of some scale insect found on citrus trees. A relatively high concentration of hydrocyanic acid killed the eggs of the scale; but a low concentration stimulated the eggs so much that a larger percentage hatched than in the control groups.

A local anesthetic, in terms of Claude Bernard's theory, must be a substance which is taken up sufficiently rapidly and completely by the proteins in the immediate neighborhood so that it is not transported through the whole system by the blood. The administration of adrenalin along with novocain closes the capillaries to some extent and thereby helps localize the action of the latter. This phase of anesthesia was not discussed by Claude Bernard because local anesthetics were not known at that time.

According to Claude Bernard's theory, morphin, ether and chloroform act on the brain before they act on the sensory nerves, which is manifested by the fact that the patient becomes unconscious before he loses the sensation of pain. Since morphin acts less rapidly on the sensory nerves than the true anesthetics, the administration of morphin will displace ether or chloroform from the brain to the sensory nerves and will cause anesthesia with less ether or chloroform. The first distinction between an anesthetic and a narcotic is that anesthet-

ics act first on the sensory nerves and then on the brain, while narcotics act first on the brain and only considerably later on the sensory nerves.

In terms of Claude Bernard's theory, the chief difference between an anesthetic and a narcotic, a habit-forming drug, as explained by Dr. Bancroft, must be that ether is eliminated relatively rapidly, while morphin is retained for a longer period of time. This has been found to be true.

Nitrous oxid does not coagulate albumin, and yet is used as an anesthetic for man. It apparently interferes with the oxygen metabolism giving rise to acid products, which cause the flocculation. Wieland, who did some very critical work on nitrous oxid, was the first to point out that it should be separated from the ether and chloroform type. He points out that these gases produce an effect similar to mountain sickness, being led to the view that there is an inhibition of oxidation, especially in the brain.

The most recent development of the theory of Claude Bernard is the colloid chemistry of insanity. The brain may be made abnormal by getting the proteins either over-coagulated, or over-peptized, or made mushy. The insanity due to coagulation should be alleviated by sodium thiocyanate, a peptizing agent, which causes the aggregates to be broken down into smaller particles and causes more motion, and should be aggravated by sodium amytal, a substance which causes coagulation of proteins. This gives a direct chemical test to determine which type of insanity a person may have. The data regarding insanity lay dormant for years; no explanation being suggested for the underlying cause until Dr. Ludlum applied Claude Bernard's coagulation theory. Some very successful work has been done in this field by Wright, Borg and Lang. Striking results have been achieved at the University of Wisconsin² by treating patients afflicted with dispersion insanity with coagulating agents.

According to Dr. Bancroft,³ catatonic stupor is a case of dispersion insanity and epilepsy and manic depressive insanity are cases of coagulation insanity.

Claude Bernard's theory of reversible coagulation of proteins has helped in the study of phenomena connected with anesthesia, strychnin, histamin, potassium salts, curare, hay-fever, and insanity.

It is due entirely to the enthusiasm and efforts of Dr. Richter and Mr. Rutzler that so much has been accomplished. The work on insanity is really the outgrowth of work started by Dr. S. D. W. Ludlum, of Philadelphia.

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SUBACUTE COMBINED DEGENERATION OF THE SPINAL CORD AFFECT- ING TWINS

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and

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The literature contains many reports of homologous tumors occurring in twins^{1, 2, 3, 4, 5, 6}, and the development of similar psychopathic states in identical twins also has been noted, but to our knowledge no cases of twins with pernicious anemia and subacute combined degeneration of the spinal cord have been reported.

REPORT OF CASES

Case 1. A man, aged fifty-one years, came to The Mayo Clinic, April 23, 1931, because of paralysis of his lower extremities, of two years' duration. He stated that his twin brother, who accompanied him to the clinic, was troubled with numbness and tingling in his hands and feet, and that one paternal uncle had died of a slowly progressive form of paralysis.

The patient had been well until 1929, when persistent numbness and tingling of his hands and forearms developed and shortly thereafter he noticed a queer, tight, girdle-like sensation about his waist. Later in the same year, paresthesia appeared in his feet, his legs became stiff, and he had trouble in controlling them in walking.

In September, 1929, he was forced to take to his bed because of ataxia and spasticity of his legs, and he was practically bedridden from then until the time of his admission to the clinic in 1931. His lower extremities became markedly swollen shortly after he had become bedridden, and progressive flexion occurred. During the sixteen months prior to his arrival for examination, his hands and arms had become progressively weaker, spastic and ataxic. In March, 1930, urinary retention first developed; some months later rectal incontinence appeared. He volunteered the information that there had been frequent, gross, involuntary twitching of the muscles of the lower extremities. He had lost about 15 pounds in weight.

Examination of the heart, lungs, and abdomen gave essentially negative results. The spleen could not be palpated. There was complete rectal and vesical incontinence.

Paraplegia in flexion of the lower extremities was marked, with beginning flexion in the upper extremities. Muscular weakness was very

marked, especially in the lower limbs; this was associated with increased muscular tonus except in the lower portion of the legs, which were flaccid. There was also definite atrophy of the muscles of the lower extremities. Moderate incoördination of the upper extremities was present. All the tendon reflexes were exaggerated; the Hoffman reflex was positive bilaterally, and on application of the Babinski test there was bilateral plantar extension. Vibratory sense was completely lost as far upward as the knees and was markedly diminished at the level of the iliac crests. Tactile sense was likewise entirely lost as far upward as the iliac crests and was diminished over the hands. Joint sense about the feet was absent, and about the fingers was impaired. Pain and thermal sensations were diminished 50 per cent over the lower extremities. The Wassermann test of the blood was negative. The urine contained a moderate amount of albumin, an occasional erythrocyte, and many pus cells. Fractional analysis of gastric content after a test meal gave evidence of achlorhydria. The concentration of urea was 28 mg. in 100 c.c. of blood. The value for hemoglobin was 52 per cent (Dare); erythrocytes numbered 3,010,000 and leukocytes 8,000 in each cubic millimeter of blood. The percentage of small lymphocytes was 13; of mononuclears 4, and of neutrophils 83. In the blood smear were a few macrocytes, but no positive shift (Arneth) was evident. Examination of spinal fluid gave entirely negative results, except that the test for globulin was positive. Roentgenograms of the thorax, spinal column, and head were negative.

Case 2. The twin brother of the patient mentioned in case 1, stated that he had been well until 1923. At that time he had noted numbness and tingling of his hands and feet, a condition which had first appeared suddenly one cold winter evening, while he was riding in an open wagon. At the onset he had felt "numb from his hips down" and had noticed a sensation of constriction about his waist.

During the year following the onset of his trouble, his condition remained stationary. He was unable to work because of ataxia of his legs. He was able to milk his cows, however, but with considerable difficulty. In 1925 his condition improved, so that he was able to do practically all of his farm work between 1925 and 1931, although paresthesia persisted in his hands. He had a sore tongue in the winter of 1930. He stated that the paresthesia was more disturbing during cold weather.

The patient appeared to be healthy, except that he was somewhat poorly nourished. He weighed 150 pounds. The systolic blood pressure was 176

mm. of mercury, and the diastolic, 98 mm. The tongue was smooth and atrophic. Examination of the heart, lungs, and abdomen disclosed nothing of note. The Wassermann test of the blood, and urinalysis gave negative results. The concentration of hemoglobin was 82 per cent (Dare); erythrocytes numbered 4,400,000 and leukocytes 5,000 in each cubic millimeter of blood. The differential count was as follows: lymphocytes 28.5 per cent; mononuclear leukocytes 3.5 per cent; eosinophiles 4 per cent; and neutrophils 64 per cent. In the blood smear were noted also, definite macrocytosis and a slight shift to the right (Arneth). The blood picture in this case was more suggestive of pernicious anemia than that in case 1, although it was not typical. Examination of the gastric content gave evidence of true achlorhydria. Fractional analysis disclosed no free hydrochloric acid after a test meal, nor after administration of histamin.

There was slightly increased tonus of the muscles of the upper extremities. The tendo-Achilles reflexes were absent bilaterally, and the patellar and hamstring reflexes were slightly diminished. Elicitation of the Hoffmann reflex gave a positive reaction bilaterally, and on application of the Babinski test there was bilateral plantar extension. The Rhomberg test was positive. Vibratory sense was absent at the ankles and markedly impaired at the level of the crests of the ileum. Joint sensation was impaired in the toes. There was slight impairment of tactile sensibility over the distal portion of the legs and over the fingers; sensibility to pain and temperature were only very slightly changed.

COMMENT

While we were working on this paper, it came to our attention that there were adult male twins in the Rochester State Hospital, who had dementia praecox. One of the patients was reported to have pernicious anemia. On investigation, it was found that the blood of one of these patients gave a characteristic picture of pernicious anemia, but the leukocytes of the other displayed no typical shift to the right; free hydrochloric acid was not found in the gastric content of either. Neither presented any objective signs of involvement of the spinal cord. An interesting observation relative to the psychiatric condition was that they had practically identical, fixed, systematized delusions.

Recently considerable interest has centered about the hereditary aspect of achlorhydria in pernicious anemia and subacute combined sclerosis. Many instances in which pernicious anemia, with or without subacute combined degeneration, has occurred in several members of the same family,

may be found in the literature, the most remarkable example being that of Maclachlan and Kline, who in 1926 published an account of seventeen cases of anemia occurring throughout four generations.

The twins whose cases are reported apparently were of the uniovular type. The degeneration of the spinal cord of one of them was of short and progressive course, whereas the brother had a long remission and was but slightly affected, although he had never received treatment for anemia. The diagnosis of subacute combined degeneration was very definite in these cases. The possibility of heredofamilial degenerative disease is to be considered, but in the absence of any other hereditary stigma, and the fact that the brothers are probably of the uniovular type, leads to the conclusion that there exists a certain inherent tendency to specific changes in the spinal cord. In the twins who are mentioned in the comment, the picture was not so complete.

Just what practical interpretation one should place on the occurrence of similar diseases in identical twins remains debatable. Seemingly sufficient evidence has been collected to set at rest the idea that they are chance conditions. There appears to be a fundamental biologic factor, which, under given circumstances, renders identical twins more susceptible to influences or diseases that are primarily endogenous. There is still much confusion concerning the beneficial effects of liver, ventriculin, and other treatment of subacute combined degeneration of the cord, but as a whole the results have been favorable, and in some instances striking.

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SPONTANEOUS SUBARACHNOID HEMORRHAGE IN CHILDHOOD*

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Spontaneous subarachnoid hemorrhages were not recognized in this country until 1914, when Samuel Leopold of the University of Pennsylvania, reported three cases¹. The symptom complex had been studied in France for some time². It was later reported by C. P. Symonds³, Guys

Hospital, London, and by F. Parks Weber⁴ of German Hospital, London. Samuel S. Leopold⁵ has reviewed the subject in a contribution to the *Medical Clinics of North America*, January, 1930.

The subarachnoid space between the dura and pia mater is normally filled with cerebrospinal fluid. It is in direct connection with the ventricular system. Blood appearing in the subarachnoid space may be from two main sources; first, from rupture of a meningeal vessel lying within the space itself; second, from rupture of a vessel within the brain substance breaking through the pia mater, if superficial, or as is more frequent, into a ventricle, since cerebral hemorrhages are as a rule deeply situated. Many of these hemorrhages are small and soon clot, give symptoms of pressure, such as headache for a few days, and completely recover. Some cases are reported as having recurred several times.

The source of the hemorrhage may be suspected by the symptoms presented. If the hemorrhage is from within the cerebral tissue, there may be focal symptoms and signs of meningeal irritation. If however, the hemorrhage is from a meningeal vessel, signs of local cerebral damage are usually absent. The effusion finds an easy outlet into the subarachnoid lake at the base of the brain around the pons. This will give symptoms of pressure only. Thus the symptoms of subarachnoid hemorrhage may vary from extreme cortical irritation and convulsions to coma and respiratory embarrassment. The usual symptoms are sudden, intense headache, pain in the back of head or neck, coma with convulsions and rigidity. There is rarely paralysis and usually no fever at the onset.

Blood in the spinal fluid is always present in subarachnoid hemorrhage. A definite diagnosis cannot be made without spinal puncture. There is no danger in removing a few cubic centimeters of spinal fluid for examination. The spinal fluid is consistently bloody, i. e., if it is drawn into three test tubes the third will be as bloody as the first; whereas, if a bloody fluid is obtained by needle injury to a blood vessel, the bleeding will soon stop and later tubes will show less color. Accidental blood will clot, whereas the bloody fluid from subarachnoid hemorrhage does not clot. When the bloody spinal fluid stands, the cells will settle to the bottom of the tube and leave a clear, supernatant fluid in accidental hemorrhage, and a yellowish, xanthochromic fluid in subarachnoid hemorrhage. This bloody spinal fluid is usually under increased pressure and should be carefully drained out until the pressure returns to normal.

Subarachnoid hemorrhage may result from a great variety of causes. It may occur in syphilitic,

*Presented before the Medical Study Club of Des Moines, October 28, 1931.

tuberculous or meningococcic meningitis. It may occur in certain blood dyscrasias, such as hemophilia, leukemia, or purpura. It may arise from rupture of an embolic intracranial aneurysm which has developed during a malignant or subacute infectious endocarditis. Certain bacterial infections such as scarlet fever, may weaken an artery by infection of the medium.

Arteriosclerosis, high blood pressure and syphilis are not frequent causes of subarachnoid hemorrhages in young patients. In fact, neither Turnbull⁶ nor Fearnside⁷ believes that syphilis is ever the cause of intracranial aneurysm. Subarachnoid hemorrhage may be spontaneous or idiopathic and several such cases are reported in the literature.

Spontaneous subarachnoid hemorrhage excludes all cases resulting from trauma, specific infections and blood dyscrasias. This leaves only arterial weakness and arterial aneurysm of non-bacterial origin to be considered. Parks Weber⁴ writes, "Rupture of a 'congenital' or 'developmental' aneurysm is one of the most important causes of non-traumatic—i. e., 'spontaneous' intracranial (especially subarachnoid) hemorrhage in youthful and otherwise apparently healthy individuals. That is to say, in the absence of any tumor or any obvious venal or vascular disease and in the absence of any known infection (including syphilis) or general tendency to hemorrhage (hemophilia, purpura, leukemia) such aneurysms—more than one of which are occasionally present in the same person—are presumably dependent upon some local, congenital, developmental defect in the vessel wall, so that by some writers they have been termed 'congenital.' In most cases, however, aneurysm itself is probably not, strictly speaking, congenital, but arising on a congenital developmental basis. H. Eppinger (1887) seems to have been the first to have suggested the congenital, developmental nature or basis of some aneurysms. According to his hypothesis they develop on the basis of a congenital defect in the muscular tissue of the vessel wall. Small aneurysms, which by their rupture give rise to spontaneous subarachnoid hemorrhage, are most frequently situated at the base of the brain, near the circle of Willis, and doubtless at postmortem examinations their presence has been frequently overlooked."

Symonds³ published in *Guys Hospital Reports*, the history of a man aged twenty who had had three attacks of spontaneous subarachnoid hemorrhage, one at twelve years, another at seventeen and a third at nineteen years. In reviewing seventy cases of subarachnoid hemorrhage which he had collected, Symonds found no satisfactory cause for the hemorrhage in twenty-seven. Of these twenty-seven patients, seven died and

autopsy notes recorded a profuse subarachnoid hemorrhage (as a rule basal) without discovery of any ruptured vessel. The age incidence of these patients was ten to fifty-six years. There were six between ten and twenty years of age.

SUMMARY

Spontaneous subarachnoid hemorrhages occur in apparently perfectly healthy young adults, probably due to congenital arterial weakness and aneurysm. Such aneurysms may rupture rather spontaneously and without much provocation. The symptoms are sudden, intense headache, usually in the occipital region and neck, sudden coma and convulsion. In some cases the symptoms are all of pressure at the base of the brain, in others of meningeal irritation. The spinal fluid is bloody. It does not clot and the supernatant fluid is xanthochromic after sedimentation of the cells.

TREATMENT

As spinal puncture is absolutely necessary to make the diagnosis, it is likewise indispensable in treatment. Relieving the pressure around the base of the brain may be a means of saving a life. Removing the pressure from the subarachnoid cistern will diminish the meningeal irritation from the spread of the blood up over the cerebral cortex. Headache, coma and frequently the convulsions may be relieved by the spinal puncture. Other means of reducing intracranial pressure, particularly the intravenous use of hypertonic glucose solution, should be of value. Theoretically, the sudden relief of intracranial pressure may predispose to further hemorrhage, but this is a justifiable risk because if the hemorrhage be massive or continuous, the prognosis is extremely grave.

The literature contains reports of several cases of recovery from small subarachnoid hemorrhages. The cases with meningeal symptoms seem to have a better prognosis than those with sudden coma. The prognosis depends on the magnitude, duration and recurrence of the hemorrhage. If the extravasation is small and the pressure can be relieved by spinal puncture, recovery may be expected, although recurrence is not uncommon.

Case Report. A. B., aged eleven years, awakened as usual the morning of September 17, 1931, ate her breakfast and went to school. While standing in the schoolyard with her playmates prior to the opening bell, she suddenly complained of intense pain in her head, fell over in an unconscious state and began having convulsions. She was soon taken to the hospital by the emergency ambulance, where I saw her with the attending physicians, Drs. L. F. Ricker and Harry West.

She was unconscious and was having frequent convulsions. There were clonic movements of

the arms and face muscles, chewing and biting. The eyes were open, pupils dilated and the head was retracted. The legs were rigid in tetanic spasm with toes and foot extended. Kernig's sign and reflexes were impossible to obtain because of the rigidity. The head could be flexed forward but must have caused pain, as convulsions invariably followed the test. Between convulsions the pupils were equal and reacted to light. There was vomiting, but no bowel movement. The catheterized urine was negative. Rectal temperature was 98°; pulse 90 to 95. Respiration was slow and shallow. Spinal puncture obtained a bloody spinal

hagic tendency, such as ecchymosis or petechia. There was no lymphatic gland enlargement and the spleen was not palpable, all of which would tend to rule out a blood dyscrasia. The temperature was normal, and pulse and respiration slow. Strychnin poisoning was considered, as she went into tetanic spasms every time she was disturbed. An analysis of the stomach contents at the state laboratory⁹ was negative for evidence of poison.

Spinal puncture was done to make the diagnosis and ruled out syphilis and meningitis, but confirmed the diagnosis of hemorrhage into the subarachnoid space.

The following is the pathologist's report of autopsy performed on the body at the morgue of the Iowa Lutheran Hospital at 1:00 p. m., the day of the patient's death:⁸

"The body is that of a female child eleven years of age. Examination of the chest showed the heart entirely normal in size and in all other respects. No lesions of any valves were found. The lungs were congested and somewhat edematous. No other lesions found.

"Examination of abdominal cavity was negative in every respect. Cranial cavity was then opened. On cutting away the dura, extreme congestion of blood vessels all over both cerebral hemispheres was found. On removing the brain a subarachnoid hemorrhage was found around the pons and the medulla. On opening both lateral ventricles a blood clot about 2 cm. in diameter was found in both posterior horns and the anterior horns of the right ventricle. There was also a blood clot distending the third ventricle. (On further reflection it may be that these clots were merely coagulated spinal fluid which contained a great deal of blood.) There were many dilated vessels in the substance of the brain but no single extravasation of blood could be found in the cerebral substance nor in the cerebellum which could be incriminated as the origin of the bleeding. Multiple section across the pons and medulla showed that hemorrhage was entirely limited to the subarachnoid space.

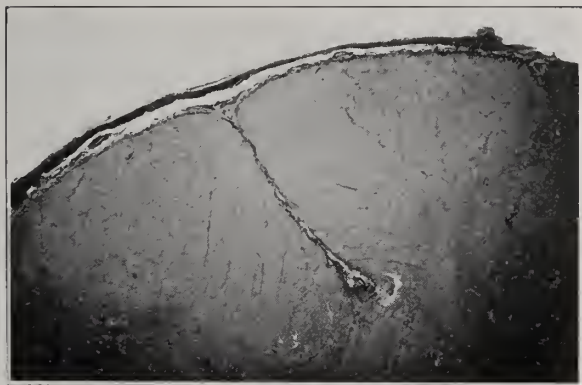
"It is apparent, then, that the subarachnoid hemorrhage around the brain stem was in all probability the primary lesion and that all other findings were secondary.

"Inasmuch as a question of strychnin poisoning has been raised, the stomach contents were sent to the state toxicologist, but both the clinical aspects of the case and the findings in the central system rule out this diagnosis.

"Diagnosis: Subarachnoid hemorrhage."

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Microphotograph illustrating a section of cerebral cortex with a layer of red blood cells beneath the arachnoid and dura mater X 320.

fluid under marked pressure, and the spinal fluid was as bloody in the third tube as the first. The cells sedimented in twenty-four hours left a clear, light amber-colored supernatant fluid. There was no clot. Culture was negative in three days. The Wassermann and Kahn tests, were negative. The patient died of respiratory failure at 11:30 a. m., less than three hours from the onset.

There was a bit of past history that may or may not be pertinent to this condition. Three years before she had had a moderately severe scarlet fever. The attending physician found a loud systolic murmur at the heart apex and thought she had an endocarditis. The murmur was distinctly audible at the time of the entrance examination, but at postmortem examination the heart valves and endocardium appeared to be quite normal. Differential diagnosis was a problem with several possibilities. Evidence of trauma about the head was searched for. There were no signs of injury about the head and face. There was no bleeding from the nose or ears. The pupils were equal and reacted to light. She was catheterized and the urine was examined for albumin and sugar as a possible cause of the coma, but found to be negative. There was no evidence of a hemor-

4. Weber, F. Parks: International Clinics ii, Series 39, (June) 1929.
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6. Turnbull, H. M.: Brain, xvii, 50, 1918.
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9. Teeters, Wilbur J.: (Analyst, State University of Iowa College of Pharmacy.)

PRIZE ESSAY ON GOITER

The American Association for the Study of Goiter again offers an award of \$300.00 for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Hamilton, Ontario, Canada, June 14, 15 and 16, 1932. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in English and in the hands of the corresponding secretary, J. R. Yung, M.D., Rose Dispensary Building, Terre Haute, Indiana, not later than March 15, 1932. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

The first award of the 1931 Kansas City, Missouri, meeting was given Dr. Bruce Webster, Presbyterian Hospital, New York City, "Studies in the Etiology and Nature of Simple Goiter as Produced Experimentally in Rabbits."

Honorable mentions were awarded as follows: Drs. W. H. Cole and N. A. Womack, St. Louis, "Experimental Production of Pathologic Lesions of the Thyroid Gland by Infective Means." Drs. J. Lerman and J. H. Means, Boston, "The Gastric Secretion in Exophthalmic Goiter and Myxedema." Dr. C. O. Rice, Minneapolis, "Life Cycle of the Thyroid Gland in Minnesota."

WRIGHT COUNTY CONTRACT INCREASED

One year ago it was reported that the Wright County Medical Society had entered into a contract with the board of supervisors by which the indigent of the county were cared for under a blanket contract. First year success and second year renewal are reported by Dr. J. R. Christensen, secretary of the society, in the following letter received by the state society secretary: "The Wright County Medical Society entered into a contract with the board of supervisors for the care of the indigent sick of the county for another year March 2. Last year was the first year of the contract service and it was very much liked by both the supervisors and the physicians of the county. We received \$1,750 last year and this year it was raised to \$2,100."

MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The annual meeting of the American Association for the Study of Goiter will be held in Hamilton, Ontario, Canada, June 14, 15 and 16. The program provides for hospital clinics from 7:15 to 9:30 and dry clinics from 10:00 to 12:00 daily. The afternoon session each day will be devoted to the presentation of formal papers by eminent authorities. The evening speakers for the first day are H. C. Naffziger,

M.D., professor of surgery, University of California; M. O. Shivers, M.D., president of the association, and C. H. Mayo, M.D., Mayo Clinic. George W. Crile, M.D., of Cleveland, will preside at the annual dinner given on the evening of the second day.

COOK COUNTY HOSPITAL SUMMER CLINICS

The regular summer clinics given by the staff of Cook County Hospital under the auspices of the Chicago Medical Society will be held during the weeks of June 6th to June 18th, inclusive. As customary in time past, the usual \$10 registration fee will be charged to cover the expense of organization.

These clinics will be held during the time of the graduation exercises of the medical schools and will be a most convenient time for medical men to participate in the special activities of Alumni Week and also to attend the postgraduate clinics at Cook County Hospital. The staff of Cook County Hospital and the alumni organizations are each presenting independent programs that should be of interest to visiting physicians.

Applicants desiring to enroll for the postgraduate clinics should make application as soon as possible to the Secretary of the Cook County Summer Clinics, care of the Chicago Medical Society, 185 North Wabash Avenue.

STUDY OF THE FEEBLE-MINDED

Dr. Charles H. Mayo is credited with the statement that, "Every other hospital bed in the United States is now occupied by the mentally afflicted, insane, idiotic, feeble-minded, and senile."

Dr. K. V. Francis, psychiatrist, at the State University of Iowa, confirms this statement and adds that one in every twelve persons becomes a nervous wreck. To combat this condition he recommends the intensive study of the psychologic influences and environment of every citizen in a given area with the proper segregation of the unfit.

Dr. Charles Everett Snyder (D.D.), of Davenport, Iowa, in a recent address before the Unitarian Laymen's League, advocated the sterilization of approximately 30,000 feeble-minded persons in Iowa as a protection to society against the ever increasing burdens of taxation, disease, immorality, and crime. He states, "The only feasible method of preventing crimes is by sterilization. It is a social necessity to prevent the fecundity of these persons who are building up conditions which will overwhelm the social structure of the state and nation in the next few generations."

Much will be accomplished in the correction of many of our moral and social evils if intelligent laymen, such as Dr. Snyder, guided and influenced in their attitude by level-headed scientists, such as Dr. Francis, forcefully present their convictions in an educational campaign carried to the general public. Certainly the attitude reflected by these speakers indicates advancement and progress in the correction of mental disease and crime.

STATE HEALTH COMMISSIONER'S PAGE



O. C. Stulman, M.D.



The Practicing Physician and Vital Statistics

The practicing physician occupies a position of great responsibility in the community. He is present when children are born, administering to both the mother and the child.

For this reason every practicing physician should realize the purpose of the registration of births. He should appreciate the value to his community of the proper, prompt and careful reporting of all births (including stillborn).

Section 2397, Code of Iowa, provides that "Within ten days after each birth there shall be filed with the local registrar of the district in which the birth occurred a certificate of such birth, filled out with durable black ink, in a legible manner."

The registration of a child's birth forms a legal record to which reference is being made more frequently than ever and may be of the greatest importance. It establishes the date of birth and the child's parentage. It is often required to establish the child's age for attendance at public schools, or for permission to work in states where restrictions are placed upon child labor; to present

in courts of law for legal reasons; to establish age in connection with the granting of pensions, military duty, and other functions of a citizen. It may be important in connection with the inheritance of property or to furnish acceptable evidence of genealogy, and in fact may be important and useful in events too numerous to mention.

The official registration of its birth is the right of every child. The newborn babe, being helpless in the matter, has caused all states to place the duty and responsibility of the registration of the birth upon the attending physician. Under the circumstances, no physician has performed his whole duty to either the child or the mother, until a properly completed birth certificate has been executed and filed. The physician who neglects his patient's interest to such a degree as to fail to register a birth is certainly guilty of an injustice.

The recording of deaths, with the facts incidental thereto, is of more direct benefit to physicians. Statistics of births and deaths give us many facts and are to physicians and the public as the compass is to the mariner—they serve as a guide and point the way to progress.

PREVALENCE OF DISEASE

DISEASE	March 1932	Feb. 1932	March 1931	Most Cases Reported From
Diphtheria	50	50	25	Pottawattamie, Polk
Scarlet Fever	263	223	492	Polk, Woodbury
Typhoid Fever	7	4	4	Buchanan
Smallpox	100	141	335	Pottawattamie
Measles	13	24	82	Linn
Whooping Cough	102	97	85	Blackhawk, Floyd
Chickenpox	127	196	471	Blackhawk, Linn
Poliomyelitis	2	3	3	Cherokee, Guthrie
Tuberculosis	36	28	23	Scott
Syphilis	187	137	92	Polk, Woodbury
Gonorrhea	219	211	139	Polk, Woodbury

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THE NATION'S DRUG BILL

After the death of Mohammed, his name on the lips of Moslems struck terror in Asia, Africa and Europe. All that Alexander had conquered fell into the hands of the Arabians. The Arabian Empire grew rapidly—so rapidly, in fact, that it became unwieldy and, like the Roman Empire, it split in half. Bagdad, on the Tigris, and Cordova, in Spain, were not only the rival capitals of the Eastern and Western divisions but the most important cities of the time. Bagdad became the seat of science and the Caliph of Manum built a tremendously beautiful and well appointed hall of science in Bagdad for the use of astronomers and physicians. It was in this hall of science at Bagdad that pharmacy as a separate profession became first recognized. Records of the time would indicate that the pharmacist combined chemistry with his profession and discovered nitric acid, aqua regia, red precipitate and corrosive sublimate. They introduced or popularized such important drugs as camphor, rhubarb, senna, nux vomica, nutmeg, musk and clove.

From this lowly start, pharmacy has developed until today it ranks equal in cost to the citizens of these United States to their national medical and hospital bill. A recent report from the Committee on the Cost of Medical Care indicates that the American public spends annually some \$715,000,000 for drugs. In compiling this figure, the observers have not figured in the income derived by drug stores from any source other than the sale of drugs. No doubt, if we took into account the revenue derived by many drug stores from the sale of incidental articles—cards, lunches, stockings, groceries, etc.—the figure would reach possibly twice that represented in the report.

Of the \$715,000,000 spent annually for drugs, 26.6 per cent is spent for medicine prescribed by a physician, 23.1 per cent is spent for non-secret

home remedies, while a total of 50.3 per cent is spent for patent medicines of secret composition. Obviously, the amount of money spent for prescriptions, together with the amount spent for non-secret home remedies, must be considered as efficient spending. The money spent for patent medicines and medicines of secret composition, some \$360,000,000, certainly cannot all represent well spent money. It has been estimated that, of this amount spent for patent medicines, \$150,000,000 to \$200,000,000 is spent foolishly and in many cases harmfully. Moreover, the wasteful competition of trademarked brands accounts for an annual outlay of \$70,000,000 in advertising alone. This latter amount is, for the most part, the direct result of the practice of physicians in prescribing trademarked remedies. Official drugs and medicines can usually be purchased by the pharmacist for a fraction of the price of proprietary medicines or ethical specialties, with a corresponding reduction in price to the patient. In order, however, to effect this saving to the patient, it is necessary that the physician write his prescription for the official drug and not a trademarked brand of the official drug.

There seems to be no evidence that the manufacturers of drugs and medicines reap enormous profits. Competition tends to keep the prices at a fairly reasonable level. Even though the ingredients of patent medicines may be obtained at low prices in wholesale quantities, this fact is of no interest to the consumer who wishes to buy a single bottle of such medicine.

Government regulation and public education has done away with the most outstanding patent medicine scandals of an earlier day, but in the average drug store, shelf after shelf will be found lined with patent medicine remedies. In one California drug store, for example, the Committee found one hundred and forty-eight different brands of liver pills. Alarm must be felt in the figures produced for the sale of patent medicines. Patients attempting to diagnose their own ailments by comparing their symptoms with those described in patent medicine advertisements may frequently forego proper medical attention until it is too late to effect a cure.

The activities of the National Food and Drug Administration have gone far toward removing the extravagant and fraudulent claims proclaimed on the label of many patent medicines. They have not been able, however, to remove the suggestions of cure which prevail today. The law requires that the label declare the presence of dangerous ingredients. The law does not require that the whole formula be given to anyone—Government, doctor, or patient. To the extent of some

\$360,000,000 a year, the public still purchases an article, the composition of which is secret, to serve a need they do not ordinarily comprehend.

It is not surprising, then, that the first recommendation of the Committee is for the abolition of secret formula drugs and medicines, making it compulsory that the full formula be stated on the label and that the quantity of the various medicinal ingredients is also set forth. New and distinct preparations could be protected by United States patents. The Committee felt that little could be or needed to be done concerning the sale or purchase of home remedies. They felt that a greater knowledge of the proper use of these remedies should be required of the druggist, who, in turn, would pass this information on to the purchaser. It is not easy for one to see how this would remedy conditions. The medical profession have long contended that the pharmacist or druggist should not prescribe. It would seem that this recommendation of the Committee might foster, in some quarters at least, the attempt to diagnosis and treatment by the druggist, a practice which we have long questioned. After all, these home remedies are usually harmless preparations and drugs, the usefulness of which the general public has a fairly complete knowledge. This type of medication does not offer the hazards which are encountered in the patent medicine group, since it is quite unlikely that an individual will rely upon his knowledge of common remedies in a serious malady. He needs the suggestion or statement contained on the patent medicine wrapper or implied in the testimonials to bolster his confidence. In a great many instances, the use of these drugs commonly recognized as home remedies has been furthered by the suggestions of the physician that the patient purchase at the drug store, a trade package of a common remedy and, when the same symptoms appeared to exist again, the patient, instead of reporting to the doctor for advice, returns to the drug store and again purchases the trade package for his treatment. Where the original condition had returned, no doubt this self-medication would be efficient, but, on the other hand, should physicians permit patients to acquire such slipshod methods of handling illness? Should patients be encouraged to interpret their own symptoms and attempt self-medication?

It is quite interesting to note in this report that the drugs prescribed or dispensed through doctors do not constitute a large portion of the total cost of medical care. This Committee has diligently pursued its studies over a period of nearly five years to determine whether America's bill for sickness is greater than is warranted. In the inception of the work, the Committee, no doubt,

expected to find the doctor's fee a major item of this expense. Our surprise is perhaps no greater than theirs in the fact that the item of drugs constitutes, in the national bill for health, an item equal to the doctor's bill and the hospital's bill.

Eternal effort at improvement is the price of progress. The goal—sound and correct medical attention for all of the people of our country at a reasonable cost—is worthy of the best efforts of all citizens. Undoubtedly, everyone is foolish at least part of the time. The public would like to believe in magic and probably will continue to want to buy it. To that extent, the unnecessarily high cost of medicine represents the purchase of the kind of satisfaction that has nothing to do with effective treatment.

The medical profession itself can go far in correcting the evils indicated in this report. A carefully written prescription of official medicines, referred to a competent pharmacist, will materially reduce the bill for skilled medication. Plans which bring expert medical care to the attention of the indigent and near-indigent will go far towards combatting the use of patent medicines. The discussion of home remedies in terms of the pharmacopeia, rather than the maker's trademark, should elevate the art of the physician and minimize self-medication. Finally, we must not lose sight of the cooperation due the pharmacist by the physician. Their vocation is also a science, created as such in ancient Bagdad and prostituted only when medical cooperation failed. To justly demand adherence to a high standard of ethical merchandising bears the corollary that adequate support by the medical profession must be provided. If we wish mongrel drug stores supported by the sale of patent medicines, lunches, dry goods, and novelties in which prescriptions are treated with no greater concern than the sale of road maps or toasted peanuts, we can have them. If we wish prescription druggists employing only high grade pharmacists and catering solely to the compounding of drugs, we can have them. Their making is entirely in the hands of the medical profession and to this extent the cost of drugs in medical care is a problem of the medical profession.

PHYSICIANS VOTE WET IN LITERARY DIGEST BALLOTING

During the past few weeks the *Literary Digest* has sponsored the most extensive trial ballot which has ever been conducted on a matter of public interest. The returns on the main poll have been announced from week to week, both in the magazine and over the radio.

In connection with the regular poll, the *Literary Digest* has conducted a special classified prohibi-

tion poll from bankers, lawyers, physicians and the clergy. Their results indicate that the clergy of the United States are the dryest and the lawyers are the wettest professional groups. The bankers rank next to the clergy in their dry sentiments and the physicians vote practically as wet as the lawyers, according to the balloting in these supplementary referendums. The clergy in six states vote more than four to one for continuance of the prohibition amendment. A total of 43,608 ballots were received in the clergy poll, with 54.86 per cent voting for continuation of prohibition. The total poll of bankers of the country reveals a sentiment of nearly two to one wet, although five states show an outright dry majority. A total of 77,860 ballots were received from the bankers, of which 34.17 per cent show a sentiment in favor of the continuation of the Eighteenth Amendment, while 65.83 per cent are in favor of repeal of prohibition. The vote of the nation's physicians in their special ballot shows they desire a repeal of prohibition by a majority of over three to one. No state in this group gives a majority in favor of the continuance of the Eighteenth Amendment. Kansas is a dry state in the physicians' poll with a percentage of 43.97 in favor of continuance, while in the wet column Delaware votes 92.07 per cent for repeal. The medical fraternity returned a total of 60,229 ballots, which are divided with 24.52 per cent in favor of continuance of the prohibition amendment and 75.48 in favor of repeal of the Eighteenth Amendment.

It is interesting to note, in comparison with the ballot of 1930, that about 6 per cent more votes were cast this year for repeal than in the 1930 returns. The lawyers of the United States voted more than three to one wet and no state in the return of the poll of this profession shows an outright dry majority. Kansas tops the dry column in this poll with a percentage of 43.62 in favor of continuance, while on the other hand, the lawyers of Nevada give a majority of twenty to one in favor of repeal. The vote among all professional classes shows a shift toward wetter sentiments as compared with the returns of the 1930 poll, which corresponds roughly with the figures obtained from the main poll.

Of the 1,235 votes cast by Iowa physicians, 425 were cast for continuance and 810 for repeal. In 1930, of the 1,434 votes cast, 614 were for enforcement of the Eighteenth Amendment, 273 for modification and 547 for repeal.

DANGEROUS DOLLARS—A Correction

In the April issue of the JOURNAL, we quoted in its entirety an editorial appearing in the March issue of *California and Western Medicine*. This

editorial dealt with exorbitant fee charges, citing an instance of a physician who, in the care of a patient with a fractured hip, rendered a bill for \$4,900 for a period of seventy days treatment. This editorial reported that the physician cited was a practitioner in the Middle West and the writer was of the opinion that he resided in Iowa, since the patient's home was in Iowa.

The editor of *California and Western Medicine* has discovered his error in this matter and has furnished us with detailed information indicating that the exorbitant fee was made by a Los Angeles physician.

The appended letter from our colleague in Sioux City was received concurrently with the reports mentioned above and is reproduced with the writer's permission in order that we may furnish additional details relative to this matter.

Dear Sir:

In the April issue of our magazine I noticed you had an article under the head of "Dangerous Dollars" referring to a mid-west physician residing in a moderate sized city. Why don't you charge that gentleman up to the city of Los Angeles where he belongs, and where he lived and practiced at the time this charge was made? It seems to me that laying this exorbitant charge upon the mid-west should be corrected and placed where it belongs. The case is being tried here and there is nothing secret about it. I hope in your next issue that you will correct the location and relieve the mid-west physicians of the stigma of such an exorbitant charge.

Yours very truly,

(Signed) P. E. SAWYER, M.D.

Sioux City, Iowa.

IOWA WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION SUCCESSFUL

The two-day session of the Iowa White House Conference on Child Health and Protection held at Des Moines on April 14 and 15 attracted an estimated total of 1,000 people. There were 600 registrations, 350 of them being from outside of Des Moines. Many attended who did not register.

The high spots of the conference were the addresses of the guest speakers, and the section meetings. Dr. S. J. Crumbine, executive secretary of the American Child Health Association, addressed the opening general session on the "Business of Living." He reviewed the findings of the National White House Conferences and pointed out ways and means by which the general health of the children of the nation was being and could be improved. "The time is not far distant," he said, "when a death from diphtheria could well be

the cause for judicial investigation." Such a statement brings home to the layman and physician alike that a perfect means for protection against diphtheria is at hand and that its universal application should be accomplished.

The conference and the medical profession of Iowa were signally honored by the presence of Dr. E. H. Cary of Dallas, Texas, president-elect of the American Medical Association. Dr. Cary and F. N. Freeman, professor of education of the University of Chicago, spoke at the evening banquet session on Thursday. Dr. Cary also addressed the members of the Des Moines Academy of Medicine and Polk County Medical Association at a luncheon given in his honor Friday.

Space does not permit a review in this article of the committee reports presented in the four sections of the conference. It is understood that these reports, together, with the recommendations made, are to be published in one volume and can be secured at a cost of \$2.00. Readers of this JOURNAL wishing to secure copies may do so by writing Dr. D. C. Steelsmith, State Health Commissioner and Conference Chairman, or Mr. C. F. Pye, Shops Building, Des Moines Iowa.

Twenty-two other states in the country have had or have scheduled conferences of a similar nature to the one in Iowa. Iowa as a state may take pride in the fact that she has contributed so successfully to this nation-wide movement and the medical profession may take just pride in the important part played by its members in providing medical leadership. It is to be hoped that the physicians of the state will interest themselves in the published results of the conference and will increase their zeal in applying the recommendations in their own practices to the end that the children of the state of Iowa may have increased benefits of health and protection. Thus will the aims of the National White House Conference and the Iowa White House Conference be realized.

AMERICAN MEDICAL GOLFERS PLAY IN NEW ORLEANS, MAY 9

The American Medical Golfing Association will hold its eighteenth annual tournament in New Orleans on Monday, May 9, 1932. The thirty-six hole match will be played over the beautiful and interesting New Orleans Country Club course, followed in the evening by the golfers' banquet and distribution of prizes. Approximately fifty trophies and prizes will be distributed to winners in the various events.

The membership of the A.M.G.A. now totals 850 physicians, representing every state in the union. It is anticipated that 150 medical golfers will be attracted to New Orleans for this year's tournament.

Dr. Frank A. Kelly of Detroit is president of the American medical golfers, Dr. Homer K. Nicoll of Chicago is first vice president, and Dr. John Welsh Croskey of Philadelphia is second vice president. The local committee in charge of arrangements at New Orleans is composed of Dr. J. P. O'Kelley, chairman, Drs. L. R. DeBuys, Lucian A. Fortier, Val H. Fuchs, J. P. Leake, W. W. Leake, Louis Levy, Walter E. Levy, J. T. O'Ferrall, D. N. Silverman and Arthur I. Weil.

Fixed competition for 36 holes includes low gross, low net, choice score handicap, and kickers' handicap. Eighteen hole events include low gross, low net, maturity (limited to fellows over sixty years of age), and the "oldguard," (limited to competition of past presidents). The mayor of the host city is always invited to present the trophy for kickers' handicap.

Invitations to attend the American Medical Golfing Association tournament in New Orleans are being sent to members from the executive office in Detroit. Any male fellow of the American Medical Association in good standing is eligible to membership in the Golfing Association. Physicians are invited to become associated with this active social organization which offers much in good sportsmanship and friendship. Applications may be procured by writing Bill Burns, Executive Secretary, 4421 Woodward Avenue, Detroit, Michigan.

INSTRUMENTS OF PHYSICIANS AND SURGEONS NOT TAXABLE

The question of whether or not physicians' instruments were exempt from property tax having been raised by various members, the matter was taken up formally with the board of assessment and review and informally with the attorney-general's office. It at first appeared that although the practice of local assessors was not standardized throughout the state, yet by a rather technical interpretation medical and surgical instruments were not identical with mechanics' tools (which are specifically exempted) and that therefore physicians' were to be taxed.

However, when the matter was referred to Attorney-General Fletcher for formal legal opinion and it was viewed in its broader legal aspects, the opposite view was held. Following is the opinion which will not only simplify the making of tax returns, but is manifestly fair to the medical profession:

April 7, 1932.

State Board of Assessment and Review,
Building.

Gentlemen: We acknowledge receipt of your letter under date of March 22, 1932, requesting

the opinion of this department on the following question:

The question has arisen as to whether or not physicians and dentists are to be classified as mechanics within the meaning of the exemption granted to mechanics in Section 6944, Code of Iowa, 1931.

Paragraph 17, Section 6944, so far as material to the question provides as follows:

* * * the tools of any mechanic not in any case to exceed \$300.00 in actual value."

Dentists and surgeons, because of the nature of their business, are required to use various instruments or tools. In this connection it might be suggested that it would appear from the various provisions of Section 6944 that it was the intent of the legislature to exempt up to \$300.00 those things which the head of a family used for the purpose of making his livelihood. It must also be conceded that a dentist and a surgeon are skilled mechanics practicing a profession.

We are therefore of the opinion that the instruments of a dentist and of a surgeon which are commonly used by such practitioners in connection with the practice of their professions are exempt to them for the purpose of taxation in an amount not exceeding \$300.00,—this, within the meaning of exemption contained in paragraph 17 of Section 6944, Code of Iowa 1931.

Very truly yours,

Attorney-General.

DENVER MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

The western branch of the American Public Health Association will hold its third annual convention in Denver, June 9 to 11. About two hundred guests are expected. The number includes outstanding representatives in the public health field throughout the United States. Convention headquarters will be maintained at the Brown Palace Hotel. Among the prominent persons who will participate in the convention program are:

Dr. E. L. Bishop, state health officer, Nashville, Tennessee.

Dr. Walter H. Brown, professor of hygiene, Stanford University.

Dr. Carl E. Buck, field director, American Public Health Association, New York City.

Dr. Platt W. Covington, Western Division, Rockefeller Foundation, Salt Lake City, Utah.

Dr. Michael Davis, director, Medical Service, Julius Rosenwald Fund, Chicago.

Dr. Louis I. Dublin, president, American Public Health Association, New York City.

Dr. Kendall Emerson, managing director, National Tuberculosis Association, and secretary,

American Public Health Association, New York.

Dr. J. A. Ferrell, president elect, American Public Health Association, New York City.

Dr. E. T. Hanley, president, Western Branch, American Public Health Association, Seattle.

Dr. M. P. Ravenel, editor, *Journal American Public Health Association*, Columbia, Mo.

Dr. W. P. Shepard, secretary, American Public Health Association San Francisco, California.

Dr. Guy S. Millberry, dean, University of California, College of Dentistry, San Francisco.

Social trends in medicine and dentistry, the work of local health councils in relation to health departments, problems of adult health education, infant and maternal mortality, outbreaks of botulism in the Rocky Mountain area, Rocky Mountain fever—these are some of the numerous health questions which will be discussed during the convention. This convention, according to the prediction of officers in charge, promises to be the best in the history of the western division of the association. Physicians and others interested in public health are invited to attend.

PHYSICIAN-CANDIDATES FOR LEGISLATURE

Whereas in the past two sessions of the legislature there has been one member only of the medical profession, various electorates this year will have the chance to elect physicians to either the House or the Senate. Dr. W. E. Long of Mason City, a member of the forty-fourth general assembly, is candidate for re-election in Cerro Gordo County.

Two of the physicians seeking election to the forty-fifth general assembly are candidates for senator. Dr. B. L. Eiker of Leon, president-elect of the Iowa State Medical Society, is seeking nomination on the Republican ticket in the senatorial district consisting of Decatur, Ringgold and Union counties. Dr. F. C. Schadt of Williamsburg is a candidate for senator from Iowa and Johnson counties on the Republican ticket.

In addition to Dr. Long, five other members of the Iowa State Medical Society have announced their candidacy for representative from their respective counties. Dr. D. J. Townsend of Lohrville, for many years chairman of the Calhoun County Republican Committee, is candidate for representative from that county. Dr. W. F. Dean of Osecola is a Republican candidate for representative from Clarke County. In Guthrie County, Dr. J. A. Pringle of Bagley is a candidate for the Republican nomination. Dr. J. W. Laird of Mount Pleasant, who has also been county Republican chairman for many years, is candidate for representative from Henry County. In Jackson County, Dr. F. J. Swift of Maquoketa seeks nomination on the Democratic ticket.

That so large a number of doctors are willing to give their services to the public in the political field is excellent evidence of the public-spiritedness which is peculiarly in keeping with the ideals of the profession.

Change in Meeting Hours

Eye, Ear, Nose and Throat Section

The attention of the members of the Eye, Ear, Nose and Throat section is called to the change in their division of the program at the annual session. Instead of beginning at 10:00 a. m. on Wednesday, May 4, as outlined in the program in the April JOURNAL, it will begin at 11:00 a. m. The members of this section are to meet at that time at the Masonic Temple, where there will be cars to transport them to the School for the Deaf. The program for the entire session is given below:

OPHTHALMOLOGY, OTOTOLOGY AND RHINOLARYNGOLOGY

Wednesday, May 4

11:00 a. m.

Visit to the School for the Deaf

Presentation of Students

James E. Reeder, M.D., Sioux City

12:00 a. m.

Luncheon

Guests of J. B. Naftzger, M.D., Sioux City
Chairman of Eye, Ear, Nose and Throat Section

1:30 p. m.

St. Joseph's Hospital

School of Instruction, Dry Clinics and Demonstrations—

1. Research in Otolaryngology at University of Iowa—
DEAN M. LIERLE, M.D., Iowa City
2. Address—Treatment of Malignancies of the Nose and Throat—
WILLIAM V. MULLIN, M.D., Cleveland
3. Clinics—Eye Surgery—
CECIL S. O'BRIEN, M.D., Iowa City
4. Dry Clinics—Demonstration of Cases—
WILLIAM W. PEARSON, M.D., Des Moines

Thursday, May 5

9:30 a. m.

Room 3—Masonic Temple

1. Observations on Post-Tonsillectomy Patients—
MARTIN J. JOYNT, M.D., LeMars
Discussion by FRED W. BAILEY, M.D., Cedar Rapids
DANIEL F. HUSTON, M.D., Burlington
2. Visual Field Changes: A Three Dimensional Model for Demonstration—
ABBOTT M. DEAN, M.D., Council Bluffs
Discussion by C. W. RUTHERFORD, M.D., Iowa City
L. A. TAYLOR, M.D., Ottumwa
3. Abscess of the Pterygomaxillary Fossa—with a report of a case—
CECIL C. GRANT, M.D., Cedar Falls
Discussion by C. M. WERTS, M.D., Des Moines
ROBERT E. ROBINSON, M.D., Waverly
4. The Use of Foreign Protein as an Aid in Ocular Infections—
EDWIN C. COBB, M.D., Marshalltown
Discussion by HARVEY GRATIOT, M.D., Dubuque
ELMER P. WEIH, M.D., Clinton

12:30 p. m.

Luncheon

Guests of Sioux City Eye and Ear Academy

5. Infective Thrombosis Following Mastoidectomy—
RALPH H. PARKER, M.D., Des Moines
Discussion by SUMNER B. CHASE, M.D., Fort Dodge
STEPHEN A. O'BRIEN, M.D., Mason City
6. Occlusion in Refraction—
C. E. CHENOWETH, M.D., Mason City
Discussion by GORDON F. HARKNESS, M.D., Davenport
WAYLAND H. MALOY, M.D., Shenandoah
7. The Surgical Treatment of the Acute Frontal Sinus that is Infected for the First Time—
HOWARD E. THOMPSON, M.D., Dubuque
Discussion by ALBERT J. JOYNT, M.D., Waterloo
WILLIAM F. BOILER, M.D., Iowa City
8. Laryngeal Dyspnea—
RALPH E. RUSSELL, M.D., Waterloo
Discussion by THOMAS R. GITTINS, M.D., Sioux City
CHARLES L. CHAMBERS, M.D., Des Moines

SOCIETY PROCEEDINGS

Calhoun County

The Calhoun County Medical Society met in regular session at the Court House in Rockwell City, Wednesday, April 20. J. W. Craig, M.D., and D. J. Townsend, M.D., both of Lohrville, presented a symposium on fractures, and Emil C. Junger, M.D., of Soldier, delivered an address on Medical and Social Economics, as particularly affecting the rural physician.

P. W. Van Metre, M.D., Secretary.

Cerro Gordo County

Tuesday evening, April 19, the Cerro Gordo County Medical Society held its regular meeting. Following the six-thirty dinner, a film on infection of the hand by Knavel was shown, after which Dr. L.R. Wood-

ward, councilor for the second district, presented some matters that were to be brought up before the House of Delegates. The change in the Perkins-Haskell-Klaus law was left to the delegate. Because of the depression, it was voted that the dues be \$7.50 for next year. Dr. Channing G. Smith, president of the state society, was present and discussed these propositions. Mrs. Channing Smith, president of the state auxiliary accompanied Dr. Smith and assisted in the organization of a woman's auxiliary, which is reported upon elsewhere in this issue.

T. E. Davidson, M.D., Secretary.

Clinton County

Joseph H. Kinnaman, M.D., of Des Moines, addressed the Clinton County Medical Society, when

that organization met in Clinton, Tuesday, April 12. Dr. Kinnaman's talk was on the work of the Bureau of Maternity and Child Hygiene. At the following business meeting the question of instructions to the delegates to the state meeting was discussed, and a most enthusiastic meeting was had.

Ralph F. Luse, M. D., Secretary.

Crawford County

The Crawford County Medical Society met Tuesday, April 12, at the Hotel Denison in Denison for a short business session, after which John W. Duncan, M. D., associate professor of surgery, Creighton University School of Medicine, delivered a lecture on General and Special Fractures; Arch F. O'Donoghue, M.D., of Sioux City, spoke on Traction and Extension in Fractures, a moving picture demonstrating the pharmacologic action of restorative drugs was shown by Dr. H. F. Gerald, of Omaha, and another short motion picture of the action of drugs on the abdominal viscera was shown by Mr. Knott of the Petro-lagar Laboratories.

J. James Duffy, M.D., Secretary.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held in Panora, Thursday, April 21, with the following program: Management of Infants Under One Year, C. A. Nicoll, M.D., of Linden, and Diseases of Old Age, W. R. VanDuzer, M.D., of Casey.

Des Moines County

Members of the Des Moines County Medical Society met for a dinner meeting in Burlington, Tuesday, April 12, and heard a lecture on Fractures of the Femur, by J. T. Mathias, M.D., of Mediapolis, and a talk on Control of Contagious Diseases in Iowa from a Practitioner's Standpoint, by John T. McKitterick, M.D., of Burlington.

Fayette County

On April 5, the veterinarians of Fayette county entertained the physicians of the county at the annual dinner and scientific program. Matters of common interest to the two professions, such as inspection and regulation of meat and milk, and animal diseases, were discussed and it was felt by all present that this type of a joint meeting was very advantageous.

C. C. Hall, M.D., Secretary.

Ida County

The regular monthly meeting of the Ida County Medical Society was held in Ida Grove on Thursday, April 21. After a short business meeting E. S. Parker, M.D., of Ida Grove, presented a concise but complete and interesting paper on Benign Hyperplasia of the Prostate, which provoked a lively discussion. A paper on Blood Transfusion was presented by Paul H. Jordan, M.D., of Battle Creek. The type of transfusion apparatus now in use in the Children's Hospital at Iowa City was demonstrated.

Plans were completed for a county heart and lung

clinic in Ida Grove on the afternoon of Thursday, May 19. John H. Peck, M.D., of Des Moines, and Horace M. Korn, M.D., of Iowa City, will conduct the clinic and discuss pertinent subjects in the evening following a six-thirty dinner at the Baxter Hotel. All physicians in adjoining counties are invited to attend.

Paul H. Jordan, M.D., Secretary.

Jasper County

A contract for the care of the indigent sick in Jasper County submitted by the Jasper County Medical Society was accepted by the Board of Supervisors, at the regular meeting held in Newton, Tuesday, April 5. Quackery Gone Modern was the title of a paper presented by S. E. Hinshaw, M.D., of Newton.

Linn County

On April 14, the Linn County Medical Society had as a guest, Col. George A. Skinner, Surgeon 7th Corps Area, Omaha, who addressed the group on The Importance of the Medical Profession in the Scheme of National Defense. This paper was discussed by Major Elton L. Titus of the University of Iowa, and several films of medical importance were shown.

Thursday, May 19, what promises to be one of the most interesting meetings of the year will be held in Cedar Rapids, when Carl R. Moore, M.D., of the zoological department of the University of Chicago, will address the Linn County Society on Reactions and Functions of the Testicle: Rejuvenation. Nathaniel G. Alcock, M.D., of Iowa City, will discuss his paper.

T. F. Hersch, M.D., Secretary.

Muscatine County

Members of the Muscatine County Medical Society and their wives met in Muscatine for a six-thirty dinner meeting, Thursday, March 31. Following the dinner a fitting tribute was given by Dr. T. F. Beveridge to three doctors, all members of the society, who had practiced medicine fifty years or more. These included Dr. Emma Braunwarth, Dr. E. K. Tyler and Dr. George D. Lezotte. The scientific program consisted of a paper by E. D. Plass, M.D., of Iowa City, Recent Advances in Our Knowledge of the Cause and Treatment of Leukorrhea, and a lecture by E. von Graff, M.D., also of Iowa City, The Advantages of Total Hysterectomy over the Sub-total Operation. Both papers were illustrated by lantern slides. Guests included Dr. C. A. Boice and Mrs. C. W. McLaughlin, of Washington, who assisted in organizing a woman's auxiliary in Muscatine County, which is reported in detail in the Auxiliary section of this JOURNAL.

C. P. Phillips, M.D., Secretary.

Pottawattamie County

An all day meeting of the Pottawattamie County Medical Society was held in Council Bluffs, Thursday, April 7, with morning clinics, starting at ten o'clock at Mercy Hospital, consisting of Epidemic Influenza with Complications, by W. J. Stech, M.D.,

and J. L. Stech, M.D.; Mouth Cancer and Its Management, by E. L. Hawkins, M.D., and Cerebral Contusions, by William E. Ash, M.D. Following the noon luncheon the afternoon session was devoted to a lecture by Arnold Jackson, M.D., of Madison, professor at the University of Wisconsin Medical School, who spoke on Diagnosis and Treatment of Thyroid Disease.

Poweshiek County

The Poweshiek County Medical Society met in regular session, Tuesday, April 5, at the Community Hospital in Grinnell, and the following scientific papers were presented: Diagnosis of Kidney Affections and Anomalies in Relation to General Practice by Intravenous Urography, George D. Callahan, M.D., and Exhibition of a Fracture Case with Appliances, C. W. Howell, M.D., both physicians being from Grinnell.

Scott County

Ralph A. Reis, M.D., of the Michael Reese Hospital, Chicago, was the speaker of the evening at the regular monthly meeting of the Scott County Medical Society, held in Davenport, Tuesday, April 5. Dr. Reis spoke on Appendicitis in Pregnancy.

Tama County

The regular meeting of the Tama County Medical Society was held at the Masonic Hall in Dysart, Friday, April 22. At this meeting, the Tama County Society reciprocated in a measure for the many courtesies shown them by the Waterloo Medical Society in repeated invitations to attend their meetings, by inviting the latter to this meeting. About twenty-five Waterloo physicians responded. After a brief business meeting, F. R. Petersen, M. D., of Iowa City, presented an intensely interesting and instructive talk on the most recent methods of diagnosis and treatment of carcinoma of the breast.

A. A. Crabbe, M.D., Secretary.

Washington County

The Washington County Medical Society held its regular monthly meeting Tuesday, April 5, in the Court House. Fred M. Smith, M.D., of Iowa City, conducted a heart clinic, presenting five local cases, one of mitral stenosis with valvular insufficiency, one of heart block, one of anginal attacks, and two young boys with valvular incompetency. It was a fine clinic and a great deal of interest was taken in the program.

W. S. Kyle, M.D., Secretary.

Woodbury County

H. M. McCuiston, M.D., and L. E. Pierson, M.D., both of Sioux City, presented a symposium on Urological Diagnosis, as the scientific program for the regular meeting of the Woodbury County Medical Society held at the Martin Hotel Ball Room, Tuesday, April 12.

Iowa and Illinois Central District Medical Society

An Iowa physician, Nathaniel G. Alcock, M.D., of Iowa City, was the speaker of the evening, at the regular spring meeting of the Iowa and Illinois Central District Medical Society held Thursday, April 14 at the Fort Armstrong Hotel, Rock Island, Illinois. Dr. Alcock spoke on Transurethral Prostatic Resection.

Postgraduate Medical Association of Southwestern Iowa

The first scientific meeting of the Southwestern Iowa Postgraduate Medical Association was held at Red Oak, Tuesday, April 5, with the following program: Peritoneal Drainage, C. W. M. Poynter, M.D., of Omaha, Dean of the University of Nebraska Medical College; Acute Suppurative Condition in Bones and Joints in Children, H. M. Hamilton, M.D., of Omaha; Version and Forceps Deliveries, W. H. Taylor, M.D., also of Omaha.

AUXILIARY NEWS

Appanoose County

Mrs. W. W. Syp was elected president of the Appanoose County Auxiliary, at the annual election held Wednesday, April 6. Other officers are: Mrs. C. F. Brummitt, vice president; Mrs. C. S. Hickman, secretary; and Mrs. F. B. Leffert, treasurer.

Cerro Gordo County

Tuesday, April 19, the wives of the physicians of Cerro Gordo County met in Mason City with Mrs. Channing G. Smith, president of the state auxiliary, and organized a Woman's Auxiliary to the Cerro Gordo County Medical Society. The following officers were elected to serve during 1932: Mrs. C. M. Franchere of Mason City, president; Mrs. E. L. Wurtzer of Clear Lake, vice president; Mrs. G. E. Harrison of Mason City, secretary; and Mrs. C. B. Tice of Mason City, treasurer.

Muscatine County

Dr. C. A. Boice of Washington, chairman of the Woman's Auxiliary Advisory Committee of the State Society, and Mrs. C. W. McLaughlin of Washington, were present at the meeting of the Muscatine physicians' wives, Thursday, March 31, and formally organized a Woman's Auxiliary to the Muscatine County Medical Society, whose officers are as follows: Mrs. T. J. Wigim, president; Mrs. A. J. Oliver, vice president; Mrs. C. P. Phillips, secretary, and Mrs. E. B. Fulliam, treasurer.

Woodbury County

The Woodbury County Woman's Auxiliary organization met Wednesday, March 9, and elected the following officers: Mrs. B. A. Bowers, president; Mrs. R. W. Perkins, vice president; Mrs. Ray J. Harrington, secretary, and Mrs. George Rinker of Oto, treasurer.

INTERESTING NEWS

In Brief

In a recent decision rendered by Assistant Attorney-General Gerald O. Blake, "Osteopaths are prohibited by law from giving internal medicines and from practice of major surgery. There would be no occasion for osteopaths compounding any preparation for internal use in professional practice, and consequently they are not entitled, under state law, to purchase whisky from wholesale drug houses."

The April issue of the *Nebraska State Medical Journal* is dedicated to Dr. John E. Summers, who has practiced in Omaha since 1885. The journal contains an appreciation by Dr. William J. Mayo, Rochester, Minnesota, a biographic sketch, a syllabus of the medical papers Dr. Summers has published, and articles on surgery by his friends.

An investigation by the British Medical Association indicates that traffic violations are responsible in many instances to color blindness of drivers. They have advised that distinctive signals be used in conjunction with the signal lamps so that even a color-blind driver can be guided in traffic.

An announcement from the University of Illinois indicates a revival of the Selenium and Radium treatments which, they believe, may be of great benefit in cancer cases. A detailed report of their investigation will be presented at the annual meeting of the American Chemical Society in New Orleans.

The national committee on the costs of medical care has determined that out of every 100 small loans, 28 are negotiated to meet the costs of sickness or death. The borrowers in many instances are not responsible for the emergency expense yet they must pay from 12 to 42 per cent interest per year on these loans.

A recent announcement by Dr. Paul Bartsch, formerly of Burlington, Iowa, now of the Smithsonian Institute of Washington, indicates that oysters may surpass liver in the treatment of anemia, since he has determined that oysters contain more of the necessary organic copper salts than liver.

An exhibit has recently been established in the Benjamin Franklin Memorial and the Franklin Institute Museum in Philadelphia of ancient surgical and dental instruments portraying the application of medicinal principles to all branches of medicine.

According to studies made by the Obstetrical Department at the State University, 41.6 per cent of all still births in Iowa during 1931 occurred among premature children, despite the fact that premature birth constituted only 5.3 per cent of the total births.

A recent issue of the *Journal of the American Medical Association* announces the discovery of a new hormone which may be a specific cure in per-

nicious anemia. This hormone has been called Addison in honor of Thomas Addison, who first completely described this disease.

Because of the depression the Chicago Lying-In Hospital has announced a reduction in price on maternity cases to a low of \$55 including ten days in the hospital wards and \$75 where a private room is employed.

Expenses of Cerro Gordo county for the poor both in and outside the county home totalled for the past year \$63,313.00. The largest item was for medical aid and hospitalization which cost the county \$17,047.44.

Construction of a medical arts building, costing \$1,000,000, has been announced for Duluth. The building will be located in the downtown business district and construction will start about May 1st.

Announcement has been made of the opening of a new hospital in Rock Rapids. Property has been purchased and will be remodeled and equipped at an early date for this use.

Tuberculin valued at \$3,154 was distributed free to 150 physicians in 59 counties during 1931 by the Iowa Tuberculosis Association, according to its annual report for 1931.

Due to the extended activities of the Institut Pasteur de Paris, over 8,000 guinea pigs and other experimental animals are required annually.

PERSONAL MENTION

Dr. D. J. Glomset of Des Moines, was named president elect of the Missouri Valley Medical Society, at the recent meeting of that organization in Omaha.

Dr. C. H. Cretzmeyer of Algona, spoke before the Algona Kiwanis Club, Thursday, March 24, on the subject, "Early Diagnosis of Cancer."

Dr. C. D. Busby of Brooklyn, was elected president of the Poweshiek County Health Association at a meeting held in Montezuma, March 29.

Dr. G. H. Boetel, who for the past twenty-one years has been engaged in the practice of medicine in Rock Rapids, is leaving with his family for Omaha, Nebraska, where he will continue his active practice. Dr. K. A. Sporre, formerly of Harris, is moving to Rock Rapids, where he will take over Dr. Boetel's office, equipment and practice.

Dr. Henry Mol of Grundy Center, was the speaker at the March 14 meeting of the Grundy Center Parent-Teacher Association, talking on "Symptoms and General Care of Pneumonia, Tonsillitis. Swollen

Glands, and Boils," all of which are common ailments among school children.

Dr. J. Fred Gerken of Waterloo, has just received notification that he has been given a first lieutenant's commission, army reserves, and assigned to the medical corps.

Dr. C. A. Boice of Washington, has been appointed a member of the State Board of Health. He is appointed to succeed **Dr. A. J. Weaver**, who died about two months ago.

Dr. J. G. Stone of West Grove, has announced his removal from that city to Bloomfield, where he will continue the practice of medicine and surgery. **Dr. Stone** had been located at West Grove nearly twenty-one years.

Dr. Harold F. Noble of Fort Madison, presented a paper before the Board of Control in Des Moines, Wednesday, March 9, on the subject of "Baldness," including experiments he has recently completed.

Dr. Ben Konwaler, formerly pathologist at Mercy Hospital, Davenport, is now associated with Drs. **Walter A.** and **Carl H. Matthey**, at 712 First National Bank Building, Davenport. **Dr. Konwaler** has just returned from New York, where he completed postgraduate work at the New York Polyclinic Hospital in skin, kidney and bladder diseases.

Dr. C. W. Magnum, who for the past fourteen years has practiced medicine in Iowa Falls, is quitting general practice and will specialize in nervous and mental diseases. He plans to leave the latter part of April for Iowa City, where he will take up his new work at the Psychopathic Hospital.

Dr. F. H. Clark of Clarinda, spoke at the Chamber of Commerce luncheon, Friday, April 1, on "High Blood Pressure."

MARRIAGES

The marriage of **Miss Eola Friedman** of St. Paul, Minnesota, and **Dr. Herbert J. Witte**, of Marathon, took place Tuesday, March 15, in St. Paul. **Dr. Witte** was graduated in 1929 from the State University of Iowa College of Medicine, spent a year in internship at the Ancker Hospital in St. Paul, practiced medicine at Odebolt, Iowa, and has been at Marathon almost a year.

DEATH NOTICES

Crouse, Eugene A., of Grundy Center, died suddenly April 8 at the age of eighty-five. He was graduated in 1870 from the University of Pennsylvania School of Medicine and at the time of his death was a member of the Grundy County Medical Society.

Lord, Richard, of Cedar Rapids, died April 4 at the age of sixty-three after a month's illness following a severe heart attack. He was graduated in 1893

from the Rush Medical College and at the time of his death was a member of the Linn County Medical Society.

McMeel, Michael F., of Clinton, died April 10 at the age of sixty-four after a short illness, although his health had been failing for two years. He was graduated in 1893 from the College of Physicians and Surgeons, Keokuk, and had long been a member of the Clinton County Medical Society.

Myers, Merrill Maitland, of Des Moines, died March 27, at the age of forty-one. He was graduated in 1918 from Rush Medical College and at the time of his death was a member of the Polk County Medical Society.

Toben, Russell D., of Bloomfield, died April 13, at the age of sixty-five, after an illness of several weeks. He was graduated in 1897 from the Keokuk Medical College and at the time of his death was secretary of the Davis County Medical Society.

FERMENTABLE GRAPE JUICE

A recent decision of the federal courts sustaining a position that the activities of certain grape growers, represented by **Mrs. Mabel Walker Willibrandt**, constituted violation of the federal anti-liquor laws brings to a conclusion a discussion of this subject attracting official attention for several years.

Mrs. Willibrandt, formerly a most ardent and successful prosecutor of alleged illicit liquor dealings, appears now as attorney for certain incorporated grape growers seeking federal sanction for the sale of her clients' grape juice when it is frankly understood that the product will be used for the production of an alcoholic beverage.

Senator **Royal Copeland** of New York, who is himself a physician of high standing, has long insisted the the Federal government in advancing a loan of some \$20,000,000 through the Federal Farm Board to the California grape growers has "connived an evasion" of the prohibition laws. The recent decision of the federal courts seems to entirely support Senator **Copeland's** attitude in this matter. **Lederle Laboratories, Inc.**

KNIGHTHOOD CONFERRED ON DR. HENRY S. WELLCOME

In recognition of his generous support of medical research, **Dr. Henry S. Wellcome**, president of **Burroughs Wellcome & Co. (U. S. A.) Inc.**, of London and Washington, was knighted by King George and his name included in the New Year's honor list.

It is interesting to note that **Dr. Wellcome** is a native of Wisconsin and became a British subject by naturalization. He was graduated at the Philadelphia College of Pharmacy and Science. He is a life member and past honorary president of the American Pharmaceutical Association. The honorary degree of Doctor of Laws was conferred upon him by the University of Edinburgh in 1928.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. MCCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

Cincinnati Medical College—lecture cards issued to Dr. John A. Young, 1836-37



In the April number of the JOURNAL appeared an interesting record of fifty-three years of specialized practice in Iowa, relating the experience of Dr. Henry B. Young of Burlington, who has devoted himself continuously to the practice of eye, ear, nose and throat diseases since 1879. With his father, Dr. John A. Young, of Monmouth, Illinois, the two generations had covered a period of 94 years of continuous practice in Illinois and Iowa.

Dr. John A. Young was graduated from the Medical Department of the Cincinnati College, March 3, 1838, and through the kindness of his son, we were privileged to publish a copy of his diploma. This interesting historical document bore the signatures of Drs. Daniel Drake, Samuel D. Gross, Willard Parker, and Joseph N. McDowell, all noted names in American medicine a century ago.

We are privileged now to publish four lecture cards issued to the student, John A. Young, by the above distinguished lecturers. They bear the date of 1836-37, and form an interesting addition to the medical record of the Young family.

Keokuk College of Physicians and Surgeons; Extract from a Dedicatory Address by Prof. J. C. Hughes, October 1858

Through the courtesy of Dr. R. M. Lapsley and Dr. Frank M. Fuller, we publish an abstract of an address by Prof. J. C. Hughes at the dedication of the new college halls of the College of Physicians and Surgeons in Keokuk at the beginning of the session of 1858-59:

"Should a stranger for the first time land upon the eastern shore of this majestic river, and in his wanderings through our goodly city chance to meet with us on this occasion, he might naturally inquire, 'what means this universal rejoicing?' We would tell him that no ordinary event had called us together; that we were assembled for the first time within these halls, assembled to celebrate the proudest epoch in the history of the medical department of our State University, that of dedicating this house and consecrating it to the cultivation of the noblest and most ancient of the arts and sciences—that of medicine and surgery; an art that stood forth when pain and sickness made its first ravages in man's frail temple—a science which unfolds the mysteries of our organization, and points to some remedial agent for every disease afflicting the human family."

After tracing the development of the medical college as connected with the State University to its location in Keokuk, he continues:

"Over the old Market House, on Second Street, where now stands a fine brick block, in the fall of 1850, Prof. Samuel G. Armor, one of God's own noblemen, delivered the first introductory lecture to a class of fourteen students. The school, as also the city, the home of its adoption, was at that time in an embryonic state, yet our citizens came forth manfully and rendered the necessary aid for the comfort and accommodation of the class. General Reid, with that liberality which has always characterized the man in enterprises of this kind, donated eight lots for the object and purposes of a medical institution. This done, our citizens subscribed liberally to the erection of a building, which enabled the faculty to erect upon those grounds the north wing of our old college edifice. The next year our city fathers gave us the nucleus of a city hospital, by appropriating a sufficient amount to construct an addition to the building, which has since been used for hospital purposes. The same year, our state legislature appropriated the sum of \$5,000 from the sale of saline lands of the state for our benefit. This amount was made available by an arrangement with the city, enabling the faculty to complete the old edifice, and secure the necessary appliances for teaching.

"From a class of fourteen students, our growth increased in a small ratio until the session of 1854, when we numbered forty students. Since then, our numbers have steadily increased—the last session having had seventy-five matriculants. With this

encouragement, the faculty determined to erect a new college edifice for the more comfortable accommodation of our classes.

"During the summer of 1857, the site of the present building was purchased and work commenced, but owing to the monetary crisis which is so familiar to most of our citizens, we were unable to do more than partially finish the basement story. * * * by the aid of our honorable senators and representatives, some of whom are present on this occasion, we were enabled to secure a loan of \$15,000, an amount we hoped sufficient to complete the building we had already commenced. Early in March the work was again commenced, and the result of our labor is before you."

OBITUARIES

MERRILL MAITLAND MYERS, M.D.*

(1891-1932)

With the death of Doctor Merrill M. Myers on March 26, 1932, the life of one of Iowa's most useful and promising physicians was brought to an untimely close.

Doctor Myers was born in Glenwood, Iowa, May 24, 1891, and there completed his preliminary education. He was graduated from Des Moines College and Rush Medical College, from which latter institution he received his medical degree in 1918.

After an interne service at the Iowa Methodist Hospital in Des Moines, Doctor Myers continued his medical training with postgraduate studies in Boston, being associated with Doctor Paul D. White, with whom he collaborated in developing the most authoritative classification of cardiac diseases yet to be devised.

Returning to Des Moines, Doctor Myers was soon recognized as a leading expert in the field of cardiology.

The founder of the Iowa Heart Association in 1925, Doctor Myers continued to be its president and moving spirit until illness required his withdrawal from active participation in medical affairs. As a member of the membership committee of the National Heart Association, Doctor Myers' influence became national in scope. He appeared frequently on the programs of this society and contributed several articles to the *American Journal of Heart Diseases*. One of Doctor Myers' greatest contributions to Iowa's public health program was his participation for four years as cardiologist in the chest clinics held far and wide over the state under the auspices of the Iowa Tuberculosis Association.

Doctor Myers was an active member of the Polk County Medical Society, the Iowa State Medical Society, the American Medical Association, the Iowa

* Re-printed from the Bulletin of the Des Moines Academy of Medicine and Polk County Medical Society, April, 1932.

Clinical Medical Society, the Medical Study Club of Des Moines, and the Masonic fraternity. He was a member of the Forest Avenue Baptist Church of Des Moines, and for many years superintendent of its Sunday School.

In addition to these gratuitous activities Doctor Myers conducted a successful and extensive consulting practice and one wonders how any one man could do so many things so well. His energy and enthusiasm were phenomenal and no undertaking with which he was connected was allowed to fail.

Doctor Myers' place in the community and in the profession will be filled with difficulty. No mere recital of his activities and accomplishments will tell the story of the doctor's service or of the scientific, ethical and moral standards which guided his life. He has exemplified to the highest degree that appellation, most prized in the medical profession—a Scientific Altruist.

Russell C. Doolittle, M.D.

AN APPRECIATION

When Doctor Myers returned to Des Moines after his excellent postgraduate training in Boston, he immediately assumed leadership as a clinical cardiologist in our state.

He became interested in the work of the American Heart Association and in the early days took an active part in the solicitation of members and stimulation of interest in this new national body. As a member of the official family of the American Heart Association, he never failed to attend the annual meetings and entered actively into its business affairs. At the last meeting of the association in February he was appointed to the important membership committee. As evidence of his standing in national circles, I quote from a personal communication from the executive secretary: "I had not learned of the death of Doctor Myers and your letter came as a distinct shock. His death is not only a loss to the Iowa Heart Association but is a loss to the American Heart Association as he was always profoundly interested in its work and his advice and suggestions were invaluable."

Chiefly through his untiring efforts the Iowa Heart Association was formed in 1924 with a representative and enthusiastic membership of physicians and laymen. Doctor Myers was unanimously elected its first president which office he held continuously until compelled to relinquish it on account of illness. He was always a dominant power in any organized effort against heart disease. The next step was to make the Iowa Heart Association an affiliated body of the Iowa Tuberculosis Association, thus insuring permanent headquarters and financial backing for its activities.

Stimulated by his inspiration the postgraduate courses in diseases of the heart and lungs were established at Iowa City and Oakdale. These courses, which have been continued for several years,

have rendered a valuable service to the physicians of Iowa who have expressed their sincere appreciations.

One of his outstanding professional accomplishments was the institution of the combined heart and lung clinics, popularly known as chest clinics. He held more than one hundred of these clinical conferences throughout the state during a period of five years. He also devoted many hours to his cardiac clinics at the Des Moines Health Center.

His remarkably thorough knowledge of the subject of heart disease and his vivid method of presentation of clinical cases was acknowledged by a large circle of friends among the medical profession. Doctor Myers was an enthusiastic clinician, a master of correct English, a most interesting and earnest speaker, a strong but pleasing personality and those who were privileged to listen to him can never forget the experience. The spirit of Merrill Myers will live long in the hearts of the physicians of Iowa who were so touched by his beautiful character and his devotion to the ideals of his profession.

John H. Peck, M.D.

RESOLUTIONS

Chester W. Hubbard, M.D.—1876-1932

Whereas, by death we have lost a worthy co-worker, Dr. Chester W. Hubbard. We bow in silence to an all wise Providence in calling him to the life beyond after many years of service to his fellow men. It may be truly said that Dr. Hubbard was a typical family physician. His years of service bear volumes of testimony from his patients as to his loyalty and sacrifice in service among them. He had a happy disposition that radiated cheer and comfort to all with whom he came in contact.

Therefore, be it resolved that the Cerro Gordo County Medical Society has lost one of its most efficient members; the family, a kind and gracious father; the community, a real friend and counselor who always responded to every activity that needed cooperation and encouragement.

Be it further resolved that a copy of these resolutions be sent to the family and that these resolutions be spread upon the records of the society, and a copy be sent to the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Cerro Gordo County Medical Society.

At the Davenport meeting on March 26, 1932, the Iowa Clinical Surgical Society passed the following resolution:

Resolved: That in the death of Dr. Donald Macrae, Jr., this society has sustained an irreparable loss, in that it may no longer have the benefit of his sage counsel in promoting surgical advancement and his genial companionship during its meetings.

Yours respectfully,

Dr. E. A. Jenkinson, Secretary,
Iowa Clinical Surgical Society.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- * ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES—For the Fiscal Year 1931—United States Government Printing Office, Washington, 1931.—Price, \$.85.
- * COURTS AND DOCTORS—By Lloyd Paul Stryker (general counsel for the Medical Society for the state of New York) 236 pages—The MacMillan Company, New York, 1932.—Price, \$2.00.
- * ELECTROTHERAPY AND THE ELEMENTS OF LIGHT THERAPY—By Richard Kovacs, M.D., Clinical Professor and Director of Physical Therapy, Polyclinic Medical School and Hospital, New York.—528 pages, with illustrations.—Lea & Febiger, Philadelphia, 1932.—Price, \$6.50.
- * INFECTIONS OF THE KIDNEY—By Meredith F. Campbell, M.D., F.A.C.S., Attending Urologist, Babies Hospital, etc. Harper's Medical Monographs, Harper & Brothers, Publishers, New York, 1931. Price, \$3.00.
- * PRIMER ON FRACTURES—Prepared by the Cooperative Committee on Fractures of the American Medical Association.—Second Edition, revised and reedited, 1931.—Price, \$1.00.
- A NON-SURGICAL CONSIDERATION OR PROSTATIC ENLARGEMENT, including a lecture on The Myth of the

Bladder Neck Bar, by Edwin W. Hirsch, M.D., associate in urology, College of Medicine, University of Illinois; urologist, Englewood Hospital, Chicago. Bruce Publishing Company, St. Paul, 1931.

PHYSICIANS' MANUAL OF BIRTH CONTROL—By Antoinette F. Konikow, M.D.—Buchholz Publishing Company, New York, 1931.—Price, \$4.00.

THE SEX FACTOR IN MARRIAGE—By Helena Wright, M.D., B.S.—with Introductions by A. Herbert Gray, M.A., D.D., and Abel Gregg, A.B. M.A.—The Vanguard Press, New York, 1931.—Price, \$2.00.

SURGICAL CLINICS OF NORTH AMERICA—(Philadelphia Number—December, 1931) Volume 11, No. 6—309 pages with 87 illustrations.—Per Clinic Year (February, 1931, to December, 1931).—Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London.—W. B. Saunders Company, 1931.

A TEXT-BOOK OF CLINICAL NEUROLOGY—By Israel S. Wechsler, M.D., Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, Neurological Institute and the Montefiore Hospital, New York City, Second Edition, Revised. 759 pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931.—Cloth, \$7.00 net.

* Book Review in this issue.

BOOK REVIEWS

ANNUAL REPORT

Of the Surgeon General of the Public Health Service of the United States for the Fiscal Year 1931. United States Government Printing Office, Washington, 1931. Price, 85c.

The United States Public Health Service is charged by law with preventing the introduction and spread of infectious diseases from foreign countries in the United States. While this function is established by law, within recent years the activity of this service has become of wider scope. In addition to its function in the prevention of disease, it now has much to do with the maintenance of health conditions locally and the furtherance of investigations which will lead to an advancement in health conditions at a future time.

It is surprising to one unacquainted with the various activities of the Public Health Service to learn of the many researches which are being constantly conducted through this channel. Through their association with various foreign agencies, health conditions in all parts of the world are being accurately studied and health conditions within the United States are subject to constant survey by local health bureaus.

The Public Health Service, through the system of quarantine and the medical examination of aliens, is actively engaged at all times in preventing the introduction of contagious or communicable diseases into this country. They have from their inception been interested in the prevention and control of venereal disease and much of our present-day knowledge of this problem has been contributed from their records.

With the appropriation of \$300,000 for the beginning of a national institute of health in 1931, the Public Health Service actively entered the field of research with plans for units in Washington, D. C.;

Cincinnati, Ohio; Hamilton, Montana, and a San Francisco laboratory. Cancer research work has been developed in connection with the Harvard Medical School at Boston. These studies during the past year have dealt chiefly with the biologic effect of x-ray and radium upon malignant growths. These and many more equally interesting problems are given special attention in this 1931 annual report.

COURTS AND DOCTORS

By Lloyd Paul Stryker (general counsel for the Medical Society of the state of New York). 236 pages. The MacMillan Company, New York, 1932. Price, \$2.00.

There are very few physicians who do not at one time or another come in contact with the law. While this statement is true, very few physicians know their responsibilities or privileges under the various statutes of this country. A number of books have been prepared on this subject, but there are few that present the entire field of legal medicine in as constructive a fashion as the present volume. This author, an attorney, has for many years served the New York Medical Society as general counsel, and on this background of experience has written a book which will profit every physician to read and study. Part I of the volume deals with the legal definition of the practice of medicine, setting forth the rights, privileges and responsibilities of a physician. Part II deals with the relationship of the patient to the physician and the physician to the patient. This section cites the doctor's responsibility in accepting a patient for treatment and, also, the responsibility of the patient in following out the treatment outlined by the physician. A final chapter of this section deals with confidential communications, setting forth not only the privilege of a physician in with-

holding such information but, also, the legal requirement that such information be withheld. Part III discusses the action for malpractice, outlining the elements of action and the physician's responsibility both for his acts and the acts of nurses, internes and other doctors under his control. A very helpful chapter in this section deals with suggestions on how to avoid being sued. Parts IV and V deal with the defense to action for malpractice and expert testimony, while Part VI discusses the doctor on the witness stand. The final section of the book deals with the doctor and criminal law, discussing assault, abortion, contraception, narcotics, prescriptions for liquor, et cetera. While the text material is limited to 214 pages, the material presented deals with almost every phase of legal contact to which the physician may be subjected. The author has drawn from his wealth of experience to cite cases and actions to prove the various points discussed. The volume is written in a terse and entertaining style.

ELECTROTHERAPY AND THE ELEMENTS OF LIGHT THERAPY

By Richard Kovacs, M.D., Clinical Professor and Director of Physical Therapy, Poly-clinic Medical School and Hospital, New York. 528 pages, with illustrations. Lea & Febiger, Philadelphia, 1932. Price, \$6.50.

In the medical curriculum there is but little time afforded for the study of electrotherapy. Physicians have had to rely, for the most part, upon the information secured from detail men relative to the efficiency of the various agencies employed in this branch of treatment. It is, therefore, timely that an author with a background of tremendous experience should prepare and offer to the profession an accurate, complete and concise text upon this subject. During the past few years physical therapy has received greater attention and is recognized by most physicians as an important adjunct to the medical armamentarium. This volume covers the subject beginning with the elementary aspects of electrophysics, traces the subject through the physics of the different electric currents and apparatus for their production and finally describes their action upon the body and technic of administration, their indications, contra-indications and dangers.

The text is prepared in four parts: the first, devoted to electrophysics; the second, general electrotherapy and electrodiagnosis; third, elements of light therapy, and fourth, devoted to applied electrotherapy. The volume is adequately illustrated by photographs and diagrams.

INFECTIONS OF THE KIDNEY

By Meredith F. Campbell, M.D., F.A.C.S., Attending Urologist, Babies Hospital, etc. Harper's Medical Monographs, Harper & Brothers, Publishers, New York, 1931. Price, \$3.00.

There is no physician perhaps in the entire field of medical practice who does not at some time find himself confronted by a medical or surgical condition

which involves a study of kidney function. This problem looms large, indeed, in the experience of the general practitioner or the internist. The largest single group of kidney malfunction is the group of infections and for this reason it seems timely that the most recent of Harper's Medical Monographs should be devoted to a study of this subject. It seems particularly fitting that this volume on infections of the kidney should be written by a physician who, because of most favorable hospital connections, should have had a chance to observe conditions of this sort first-handed over a considerable period of time.

In this small volume Dr. Campbell presents the subject in epitome discussing the methods of examination, the symptomology, diagnosis, treatment, and complications of kidney infections. No attempt is made to cover all of the literature, all of the laboratory tests proposed or all of the contributions upon theoretical considerations involved in the study. He has, on the other hand, prepared the information which has an immediate bearing upon the management or treatment of these cases.

Harper, following the form of the previous volumes in this series, presents here a highly practical book, small in size, and suitable for the physician's desk or bag.

PRIMER ON FRACTURES

Prepared by the Cooperative Committee on Fractures of the American Medical Association.—Second Edition, revised and re-edited, 1931.—Price, \$1.00.

In 1926, the Board of Trustees of the American Medical Association authorized a scientific exhibit demonstrating the proper method of handling fracture cases. Each year since that time the interest manifested in these scientific exhibits has steadily increased.

In September, 1930, the Committee on Scientific Exhibits published in book form a pictorial and descriptive review of the scientific exhibit presented. Indicative of the interest which was manifested in this subject, the first edition was promptly exhausted and in the fall of 1931 the second edition was printed. During the preparation of this second edition a sufficient number of orders were received so that the first printing of the second edition was promptly exhausted and now a second printing is available. Some changes have appeared in the revised edition prompted by exhibits at the Philadelphia meeting. The edition in text material includes compression fractures of the spine, fractures of the skull, active movement in the treatment of fractures and massage during the treatment of fractures. Other portions of the text have received some revision and in a few cases, better and more descriptive legends have been written for the illustrations used.

This volume, sponsored by the Committee on Scientific Exhibits, is still available at the original publication price of \$1.00 from the American Medical Association.

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No. 6

THE PRESIDENT'S ADDRESS*

CHANNING G. SMITH, M.D., Granger

This is neither the time nor the proper place for a lengthy discourse by a retiring officer. I have had my chance—now the race is almost run and the course is nearly closed. As tonight we start turning from the old to the new, I would rather not speak of my incumbency, but prefer to mention briefly some points gleaned from my year's experience in the hope that they may possibly assist others who will hold this position.

The constitution and by-laws state that the president shall be the real leader of the profession. This he is not. He is a figurehead attached to the bow of the vessel taking the wash of the waters during stormy weather. The president has no executive, judicial or legislative power except during the meetings of the scientific session and the House of Delegates. It is possible to conceive of a man whose scientific attainments were so preëminent, whose personality was so pleasant and whose aggressiveness so pronounced, that he could assume the actual leadership by his profound knowledge and strength of character. Unfortunately, most of us are not such paragons and the ordinary man, like myself, must be merely endured. To make the president more truly the head of the profession, he should be made a member of the board of trustees and of the council.

The activities of the state and county societies have markedly increased during the past few years. Consequently the calls upon the president's time are constantly enlarging. Every reasonable step or precaution should be taken to facilitate his performance of these most important duties. The task viewed with the most apprehension by a president is the direction of the House of Delegates. To preside fairly and squarely over this body, to see to it that the wishes of the majority

are respected and the rights of the minority protected, he must be able to detach himself completely from his personal opinions and desires. The chairman should be thoroughly familiar with the constitution and by-laws, the rules of order, the work done by the delegates in the past and in addition he should be able to foresee the agenda of the future. To relieve the president of this duty that scarcely falls within his province, I would suggest that a Speaker of the House of Delegates be added to the officers of this society.

The first medical society was formed in Breslau, Germany, in 1637. The constitution of this most ancient body declares that it was instituted for the express purpose of promoting medical training and scientific advancement. So down through the many years, all medical societies have had these same ideals and objectives. Through strict adherence to this precedent, medicine has triumphantly advanced as has no other school or science. Times have changed, customs have differed, but we have constantly striven to check the merciless march of disease, in accordance with our primary principle.

Of late years it has apparently become necessary for the members of this organization, as a society, to interest themselves in the material conditions that surround us. This concern is wise and timely if held within due bounds. We may tell of our altruism, our devotion to duty, our self-sacrifice and our love of humanity, but our exhortations will fall upon deaf ears if the hearer is listening for the caliban cry of the wolf upon his doorstep. However, extreme care must be taken that we do not become a mere political or paternal organization depending chiefly on laws, the officers or the central office.

Mythology tells us of Pygmalion, the Greek sculptor, who carved from marble his ideal of a perfect woman. As his chisel chipped the curving busts and rounding limbs, as form and face and features developed, Pygmalion fell deeply in love with his creation. So deep was his love and passion and desire that he would have died had not

*Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

Venus, the Goddess of Love, observing his plight, descended from her Olympian heights and breathed the breath of life into the silent stone. Just so surely has the initiative of the individual member breathed the breath of life into our beloved profession, into our first objective and ideal—the proper care of the sick and the afflicted. I would warn the society to forever keep this original viewpoint firmly fixed in mind.

Harmony is the support and strength of all societies. This does not mean to me that one should blindly acquiesce in all proceedings. It is not only the right but the actual duty of every member to contend for his convictions. The county society is the unit of all things medical. Discussions should arise within this body and should end in the House of Delegates. As we are constituted, this latter is the only place where an expression of the opinion of the majority can be obtained. This opinion, once given, must of necessity be considered a rule and guide until changed.

I am asking, for the good of the society, that you continue your loyal support to all officers and especially to the new president. He comes with a lighted lantern in his hand, ready, willing and competent to lead the way.

If anyone has ever been well treated by an organization, that individual is myself. Most certainly I appreciate your kindness and acts of consideration, each one binding closer little bands of affection about my heart. As my time in office grows rapidly to a close, the realization comes more clearly of my own unworthiness; the recognition dawns that hereafter, as before, the best that is in me is due you and the organization: to affirm as long as life shall last the cause of medicine and the Iowa State Medical Society.

While the program that I announced so blithely and blatantly a year ago is not completely fulfilled; while all has not been accomplished that I hoped to do, nevertheless I have no regrets and no excuses. So, though I may stand at the side of the road, please God give me strength to cheer while the winners go by.

PRESIDENT ELECT'S ADDRESS*

BERT L. EIKER, M.D., Leon

Mr. Toastmaster, Officers and Members of the State Medical Society, Ladies and Gentlemen: Throughout the history of all civilization the healing art has been in demand by suffering humanity. Its trials, its difficulties, its ups and downs have been in proportion to the trials, the difficulties, and

the perplexities of human civilization. In other words, the luxuries and the hardships of the Doctor of Medicine have been the same as those of the community in which he cast his professional lot. In times of pestilence, poverty and distress, the medical profession has always borne its share, and frequently much more than its share, of sacrifice.

In the present disastrous state of financial affairs the name of many an unproclaimed hero can be found in our membership. In times of depression and hardships, we are prone to criticize personal or collective action, to find fault with what has been done in the past, and to question the sincerity of purpose which moves men to action. This task can be performed, and well performed, by almost anyone, whether skilled or unskilled. The greatest enterprise any man ever attempted is to honestly provide for and govern himself, to generate a constructive program, to give proper credence to past history, and to visualize accurately the needs of the future. This task calls for the constructive genius of a Mayo, and the master statesmanship of a Blaine. To get both the educated and the uneducated to form the habit of thinking in terms of individual and constructive economy, without injuring progress, which is so vital to the young and rising generation; to get mankind to understand that organization means the surrendering of certain individual rights, among which is independent action; to get them to understand that the majority hold the balance of power and to let that power predominate, that if the majority decides against you, go on with the procession and waste no time in trying to resuscitate, regenerate or rejuvenate a lost cause, that dirty professional linen was never washed clean by water that has previously gone over the dam; to convince people of these truths, calls for the logic of a Hughes, and the oratory of a Bryan. Assuming these statements to be true and self-evident, it would follow that it behooves any man, regardless of his ability, standing on the threshold of the highest office within the power of the Iowa State Medical Society to bestow; to think deliberately, and measure responsibility carefully before he speaks.

One of the fundamental principles upon which the government of the United States is founded, is the division of responsibility. This principle obtains in all our subdivisions of government, and ramifies into all the social and scientific organizations of our civilization. The reason for this subdivision of responsibility is that the "chaff may be sifted from the wheat," and the finished product may reach the highest degree of perfection and efficiency. In the organization that we have for

*Read by E. M. Myers, M.D., before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

the advancement of medical science, and the rendering of more effective service for the alleviation of human suffering and the care of mankind, the subordinate organizations have certain powers which are delegated to them, and to them only.

One of the powers, which it is their prerogative to exercise, is that they shall primarily determine the *kind* and *quality* of their membership. There is no function of our organization more important than to determine the kind of men and women whom organized medicine will recognize as suitable to present our cause before that great tribunal, the laity. So vital has this matter become that many times one of the first questions asked about a physician is whether or not he is a member of organized medicine, and if not, why? Quality of membership should not be sacrificed for quantity, neither should personal prejudice or professional jealousy keep a suitable and otherwise worthy member outside the confines of our organization, because herein lies the foundation of the superstructure upon which we depend to justify our existence.

Another power of the component society is its representation, through one or more of its members, in the House of Delegates, which, according to our by-laws, is the law-making body of our organization. When the House of Delegates is deciding momentous questions, questions that involve not only finance, but scientific progress, and that body is trying to outline a policy for future constructive action; if at that time, your delegate is out on the streets with his wife, or some other man's wife, window-shopping, attending a movie, enjoying a ball game, or looking after some personal business; and the important business above referred to wins or loses by one vote; the fault lies not so much with the House of Delegates as it does with the subordinate organization for sending such a representative to the House of Delegates. Assuming that a dozen or more subordinate organizations are thus derelict in their duties, and such an assumption is not wholly without historic record, you can readily visualize what, in time, might happen to our organization. The House of Delegates, as such, has the power to carry on certain activities, to pass rules and regulations governing the action of the organization, to make assessments, to appoint committees, to order expenditure of money, and other duties equally as important and vital. Therefore, it behooves that body to approach the tasks set before it with careful consideration, due deliberation, and above all, a sufficient amount of correct information; that it may at least act constructively and intelligently. Upon its deliberations the future of organized

medicine in the great commonwealth of Iowa depends. As a law-making body, it must visualize the future, bearing in mind at all times that the thing which is cheapest and which requires the least effort, is not always the best. It also follows that the best is not always obtained by passing the responsibility from one subdivision of an organization to another, tossing a proposition about as a football is tossed among the players, and in the finish losing an opportunity that may mean much to organized medicine.

No organization can long exist without money. This money must be procured in sufficient amount to equal the expenditures, or indebtedness is the inevitable result. Money can be procured in at least three ways; first, by creating wealth through engaging in some business enterprise; second, by assessment of the members, and third, by gift. With our organization the plan of assessment has been adopted and is quite satisfactory, provided it is not abused. In order that no abuse may occur, it is essential that our law-making body keep constantly in mind the fundamental purposes of the society, which may be briefly stated in these words of the constitution, namely ". . . that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and care of disease, and in prolonging and adding comfort to life." Our expenditures, therefore, should be limited to those activities which directly and indirectly benefit every member, regardless of the kind of practice in which he is engaged. In a satisfied membership lies our power and strength; in a dissatisfied membership lurks dissension and possible dissolution. It is the opinion of your chief executive-elect that to have more money in our treasury than conservative business methods would deem ample for extreme emergencies, is unwise.

A constitution is a system of fundamental laws, capable of broad interpretation, governing an organized body, and is supposed to provide for present needs and visualize future requirements. It follows, therefore, that all constitutions are and should be broad and comprehensive in their construction. This is a wise provision, and enables one generation after another to work on the same fundamental lines, with the same definite purpose, thereby developing unlimited strength and unbounded usefulness. Some individuals, from whom the medical profession is not entirely exempt, have an uncontrollable desire to be continuously changing the constitution of any organization to which they may belong. The changing of the constitution in any organization, from the United States of America, to churches, lodges and clubs,

almost without exception, puts the governing machinery of that organization temporarily out of balance. It not only loses membership but has been known to produce open rebellion and to sever the strongest ties of friendship. To close our eyes and blindly follow a constitution which progressive years have outgrown would be equally disastrous. Therefore, it should be apparent to any law-making body that changes in the constitution should be made with the greatest caution, giving ample time for discussion and a thorough investigation of present deficiencies and of probable future results. The protests and demands of well-meaning but clamoring crowds outside the profession, many times poorly informed, should be heard and carefully weighed; but keep in mind, that their clamoring demands are just as apt to be the voice of His Satanic Majesty, as they are to be the dictates of an all-wise Deity.

In the present state of suspicion and unrest, which seems manifest in every organization, the small group meetings appear to be a fruitful source of strength and permanency. The perplexities confronting organized medicine are both local and general. Small groups of component societies have received much benefit from a timely discussion of local problems, the mapping out of constructive programs and the discussion of state and national issues. Another important function of group meetings is that they acquaint the individual with conditions outside his particular locality, giving him a broader and more comprehensive view of organized medicine and its duties, not only to its individual members, but to the people whom it serves. The personal friendships which develop in these meetings are one of the most beneficial results. To come in personal touch with each other, to listen to the personal perplexities which are never put on paper, to ask questions, to offer suggestions, to correct errors, all combine to make us more tolerant, more sympathetic and more consecrated to exalted duty. In these meetings many a man has discovered that in what he had previously believed to be an antagonistic nature there was hidden a light that when properly reflected would illuminate a hitherto unknown and unexplained corridor of professional knowledge. Little by little the curtain of experience is drawn aside, and the rays of knowledge illuminate the threshold of our professional abode.

To face the truth, and face it unflinchingly, is one of the differences between an educated and an uneducated man. Therefore, it remains to be seen whether the medical profession is truly educated; or whether it has a veneer of silk and lambs' wool, underneath which lies the cheapest cotton. In

abnormal times like the present, every fabric of our organized profession is inspected, carefully scrutinized, and severely tried. There is perhaps no organization of men in existence today with as many broadly educated, well balanced, scholarly members, as the medical profession. If our organization loses courage, if we fail in times of need, if our men falter in administering to suffering humanity, if we are derelict in hoisting the flag of organized medicine above the flag of quackery, floating as it does over the ramparts of superstition and ignorance; if we hesitate to place our colors far out in the fertile valley of financial, historic and scientific research; if we fail in all this; then we have not lived up to our opportunities and our education is subject to question and to severe criticism. On the other hand, if we march forward (and that is the only direction that ever has offered any hope to mankind), march forward with every man in perfect step, with every voice in unison, with every eye fixed upon the light of truth which illuminates the pathway to justice, with our membership administering to the mental and physical ills of mankind, with words of hope that hold faltering humanity in line until the temporary clouds shall lift; if we can do these things (and we can do them) then we have again established the fact that our profession can meet the emergencies of civilization as no other profession ever has done, and through the light of science carry hope and freedom to impoverished bodies and misguided souls.

This will lead us to individual effort and individual duty; lead us to the point where each one must rule over himself as a just king rules over his subjects; this accomplished, organized medicine will have no bounds and will shine forever in the glory of greatness.

TRUTH

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In the scheme of Divine Economy one of the most impressive conclusions we glean from our observations is the wonderful adaptation of means to an end in all forms of life. The grades of perfection from the unicellular organism to composite man are striking; there are attributes common to all and these attributes are embodied in the definition of life, for a living thing is one that moves itself, one that acts upon and perfects itself and one whose actions begin and end in itself. In the lowest forms of vegetative life we observe the vegetative principle—nutrition, growth and reproduction—and this or that particular plant is the best possible plant that nature could produce under

the existing conditions. An imperfect one represents not the work but the failure of nature, and the point beyond which nature can not further go. Thus it is a biologic truth that all vegetation exerts its nature and if the plant had a voice it would cry out, "I must have everything befitting by nature if I am to become a full grown specimen and manifest the degree of perfection which nature intended I should."

Rising a step higher toward perfection we have the brute and in it we observe the embodiment of all the perfection of the plant plus sensitive life and spontaneous locomotion. It conforms to instinctive laws in exerting its nature and is necessitated in its acts. You may have the best blooded dog, yet it will bark under your window at night if the proper motive elicits the exercise of its instinct. Rising another step, we have man, the embodiment of all the perfections of the brute plus man's inorganic faculties, intellect and free-will faculties that function in the organism but are not directly dependent on the organisms. Both brute and man conform to immutable biologic laws. It is a biologic truth that all animals of the same age, sex and weight, under basal conditions, require the same amount of heat energy to maintain life. This applies to all men, to all animals that roam the forest, to all birds that fly and to all reptiles that crawl.

Nature does nothing in vain and every faculty, organic or inorganic, has a formal object; the eye for the perception of color, the ear for the perception of sound, the will for the perception of the good and the intellect for the perception of the truth. Our organic faculties in structure and function are identical to those of the brute. The carnivorous type have their eyes placed so they can focus ahead to gain their perspective and capture prey, the exigencies of their nature being greater than those of the herbivorous type. Like the carnivorous type we focus ahead, we look upward and forward, we correlate the material with the intellectual and gain our objective.

In man there is an inclination towards the good and the truth—the formal objects of our higher faculties. Were this not true the great majority of society would not conform to these high standards in their human contacts and relations. These being the guiding principles of men, they must be the reflection of the natural law implanted in the hearts of men and must govern their free acts. Truth is a prerogative implied in all human relations, between parent and child, between teacher and pupil and between physician and patient. If one were to ask the most important prerogative of a historian the answer would be truthfulness, for if history is the instructor of our lives, facts must

be represented as they are. If the young mind in the plastic age of youth is to glean a lesson from the acts of his predecessors he must know these acts, the end of the acts, the means adopted for the attainment of that end and the circumstances that attended the taking of the said means. If one were to ask the prerogative of a physician or surgeon the answer would be the embodiment of his scientific and technical ability plus his disposition to do good and conform to truth.

In our failures so often there is expressed the sin of omission or a manifestation of unwarranted self-pride that carries operators into fields beyond their capacity and training. Consistent accomplishment in major work is the consummation of years of application and training. Through years of experience surgical truths have been established, and there can be no compromise. These truths are taught medical students; and young medical men will reflect to a greater or less degree the teachings of the master; they leave their masters with positive convictions but later situations arise which may provoke compromise. Thus, surgery in acute salpingitis is not an uncommon intervention, it is opposed to established surgical truth and the most one can do is to unsex the patient and possibly transform a local infection into a general fulminating one. Another compromise too frequently indulged in is late caesarian sections when other methods have failed, a violation of an established surgical truth. The fatalities in caesarian operations, excluding the toxic cases, usually fall into the category of engaged heads and dilated cervixes. High amputation in diabetic gangrene of the foot is a surgical truth too often compromised. The inability to recognize and treat properly the direct and indirect hernia results not in a recurrence but in a continuation. Pathology teaches us the correlation of diseased organs; the removal of one diseased structure does not preclude the possibility of more trouble. An example of correlated pathology is the gall-bladder and appendix, sometimes manifested in the necessity of a second operation.

Surgical truths are taught and are gleaned through observation, experience and study; their supplement, technic, comes through training. Our surgical acts, like any free acts, are preceded by an objectively indifferent judgment—one that proposes the pros and cons—and there arise situations in which it is a matter of surgical conscience to choose between the two horns of a dilemma; to perform a minor operation and be reasonably sure of a live patient or to perform a major operation and cure the patient. It is here that training begets courage and confidence to do what is best for the patient. That we can assist nature but we cannot

dictate to nature, is a dictum applicable in a multitude of situations, and the inverse ratio of highly specialized function and power of regeneration in organs is an established truth and disregards results in inordinate reactions. If any harm comes of an operator's shortcomings, he did his best as well as he knew it. Doubtless he did, and in that he is unlike the malicious maker of mischief; still he has chosen lightly and recklessly to hazard a great evil and to that extent his will is bound to the evil.

RADIOTHERAPY AND ITS USE IN GENERAL SURGERY*

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In the writings of ancient India, as far back as 2,000 B. C., there are found directions for the radical removal of malignant growths. Radical excision has been practiced for centuries. Results have not been too good. It is for this reason that the physical agents, x-ray and radium, have been utilized, in an effort to improve results obtained by surgery. I shall attempt to show how radiotherapy in combination with surgery will often improve results.

CARCINOMA OF THE BREAST

Carcinoma of the breast is a not uncommon condition. The United States Census Report, 1906 to 1910, cited a mortality rate of 30 per cent of cancer deaths due to carcinoma of the breast. Surgery in carcinoma of the breast has had its difficulties. As Ewing states, in "Neoplastic Disease," "From clinical and pathological material, I have drawn the impression that in dealing with mammary cancer, surgery meets with more peculiar difficulties and uncertainties than with almost any other form of disease; the anatomical types of the disease are so numerous; the variations in the clinical course so wide; the power of dissemination so free and diverse, the difficulties of determining the actual conditions so complex, and the sacrifice of tissue so great, as to render impossible in a majority of cases a reasonably accurate adjustment of means to ends."

To quote further from Ewing, "The use of x-ray and radium in the treatment of mammary cancer has been widely employed in recent years and with so much success that these agents cannot be disregarded in any competent discussion of this subject." Pfahler,¹ in 1921 suggested the preoperative radiation of carcinoma of the breast. He states: "One of the advantages of radiation therapy over surgery is that it can be used over a

larger area, and it can be used especially to surround the growth."

Westermarck,² in a recent report from the Radiumhemmet of Stockholm, gives the results of the combined radiologic and surgical treatment of carcinoma of the breast in 162 cases. Seventy-five of these patients had had operation and a post-operative course of x-ray. Forty-five of the series had had a preoperative course of x-ray, operation, and then more x-ray. Forty-two were operated upon by means of electro-diathermy and then treated by x-ray. It is interesting to mention the



Fig. 1. Mrs. W., admitted to hospital February 5, 1931. Onset August, 1929, as a small growth beneath right eye. Radical operation right antrum September 5, 1930, at Council Bluffs. Surgery was followed by x-ray. Treated here March 21, 1931 and in May. None since.

Swedish surgical statistics for those cases in which surgery alone was used. These are so-called five-year cures. They vary from the 15 per cent of Dahlgren to the 25 per cent of Grutssium. Westermarck's results for a seven-year cure were as follows: of the patients who had surgery and then a postoperative course of x-ray, 29 per cent were alive and well. Of the cases in which the primary growth was removed by surgical diathermy and x-ray then applied, 28 per cent of the patients were alive and well. These two types of treatment

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compare favorably with the statistics in which only surgery was employed. The interesting feature of this report is that of the patients who had first received x-ray, then surgery, and then more x-ray, 40 per cent were alive and well seven years later. Thus, by giving a preoperative course of radiation, an 11 per cent increase in results was obtained. Westermarck states, "In the preoperative treatment of carcinoma of the breast, radiotherapy has for its purpose to act upon the tumor tissue, its surroundings and possible metastases. In many cases it is also given with the view to

Lee and Herendeen, in 1926, reported the results of treatment of carcinoma of the breast at the Memorial Hospital. Operation with both postoperative and preoperative radiation by means of x-ray gave a three-year result of 46 per cent. Operation and only postoperative x-ray gave 33 per cent. Operation alone gave 21 per cent. At present, according to Lee, they are running a somewhat similar series but are giving interstitial radiation also.

Carnett, Professor of Surgery at Pennsylvania Post Graduate School, in a recent discussion, states that "a combination of radical surgery and irradiation is the treatment of choice in early breast cancer."

Keynes,³ an Englishman, is very radical in his views. "Personal experiences with both methods of treatment (radiotherapy and surgery) over a period of years has convinced me that the use of radium is to be preferred to surgery." He has had twelve cases of carcinoma of the breast, declared inoperative, and of these patients, eight were alive and well from one and one-half to four and one-half years after the application of radium.

OSTEOGENIC SARCOMA

In this condition, diagnosis is none too easy. As Ewing states in "Neoplastic Disease," "Roentgenograms are of equal or greater importance than the microscopical section." Pfahler⁴ has said, "When the expert radiologist is in doubt, the pathologist is also often in doubt, or if the microscopical slides are sent to several equally expert pathologists, the opinions are apt to differ."

Magnusson⁵ reports on thirty-nine cases of osteogenic sarcoma treated at the Radiumhemmet between 1910 and 1928. Twenty-six of these cases were diagnosed by tissue. There was a history of preceding trauma in about 50 per cent of the cases. Thirty-two of these patients were dead at the time of this report. Of the seven survivors three were alive eight years after therapy, one seven years, one three years, and one less than two years. Twenty-six of the patients died within one year of treatment. Magnusson⁵ states, "Experience has shown that, unfortunately, the majority of cases are already systemic by the time treatment is instituted and that definite healing is, therefore, in most instances, impossible to obtain." He concludes that "a preoperative course of radiation followed by surgery would be the best therapy."

Holfelder, as quoted by Pfahler,⁴ has treated twenty-five cases of osteogenic sarcoma since 1921, and up to 1926. Ten died, while sixteen were well for three years, and nine were well for two years. Holfelder has seen cases in which there was no clinical improvement until after eight or ten months. He suggests biopsy of the growth for



Fig. 2. Mrs. W. Appearance on July 15, 1931. Patient since returned on March 18, 1932, with history of severe nasal bleeding, and is getting more therapy now.

establishing, by way of an absorption process, a diminution of the peritumoral infiltration and thereby facilitate the removal of the tumor. . . . In addition, there is the aim of causing attenuation of the virulence of the tumor, thereby diminishing the danger of dissemination of the tumor through surgical intervention. . . . Lastly, it would seem possible, according to some observations, that the healing process, initiated by irradiation of the tumor, may produce a certain resistance in the organism against latent metastases in an early state of development."

diagnosis, but only after one month of radiation. As reported by Magnusson,⁵ "Holfelder maintains that a successful result can be obtained only by the use of very large doses. He points out the slowness of the tumor's reaction, on account of which there, preferably, should be long intervals between the series." As Pfahler⁴ remarks, "From practical observation it seems, therefore, that preliminary irradiation is useful even though one decides upon operation at a later date." He continues, "Based upon a study of fifty-eight cases of osteogenic sarcoma treated by irradiation, together with a review of similar work done in other clinics, we feel justified in concluding that the only two methods of treatment for this disease are irradiation or surgery, or the two combined. The results from irradiation seem to be at least equally as good as, and we believe better than, those obtained by surgery alone."

CARCINOMA OF THE LIP

Quick has reported 2,741 cases of carcinoma of the lip treated between 1917 and 1922 at the Memorial Hospital, New York. Twenty-one per cent of these patients were in good condition five to ten years later. The neck was not operated upon if the capsule of any palpable glands was invaded. These results compare very favorably with surgery.

Martin has reported 119 cases of carcinoma of the lip, treated by radiation alone. One hundred and four never metastasized. Eighty-six cases were primary without clinical evidence of metastases, and these patients were all well for five years. Twenty-two patients had more local involvement, but no clinical metastases, and of these 77 per cent were well for five years. Eleven patients with metastases were all dead in less than five years.

Miescher has treated sixteen cases and cites ninety-seven cases of carcinoma of the lip treated at the Radiumhemmet. Both of these series showed 81.5 per cent five-year cures, though the latter cases had radium and the former had x-ray. It is interesting that Miescher with x-ray got similar end results as the Radiumhemmet did with radium.

EPITHELIOMA OF THE SKIN

This is a condition which is especially amenable to x-ray therapy. It is equally true that surgery will give excellent results. However, there are locations such as the face and the inner canthus of the eye where radiation therapy can be applied with more ease than surgery, and with less chance of scarring. Forssell, in 162 patients with epithelioma of the skin, reports 86 per cent still free

from the disease seven years later. Daland had 203 patients with 81 per cent well for three years. Hamson had 426, of whom 86 per cent were well for five years.

Hazen reports 178 cases of basal cell epithelioma which had been excised at Johns Hopkins Hospital. Eighty-six per cent of these patients were well five years later, while McKee treated 222 by radiation and 90 per cent were well five years later, which is the same in results.

The following cases are of interest in this connection:

Mrs. H. W., aged thirty-two years, was admitted to the hospital February 5, 1931. The onset had occurred in August, 1929, as a small growth beneath the right eye. Radical operation on the right antrum, followed by x-ray, was performed elsewhere in September, 1930. She had two series of x-ray treatments. Biopsy showed epidermoid carcinoma (Figs. 1 and 2).

Mr. C. M., aged fifty-nine years, was admitted to the hospital April 29, 1931. He had a lesion of psoriasis fifteen years previously at the same site, and acid was applied at that time. The lesion had

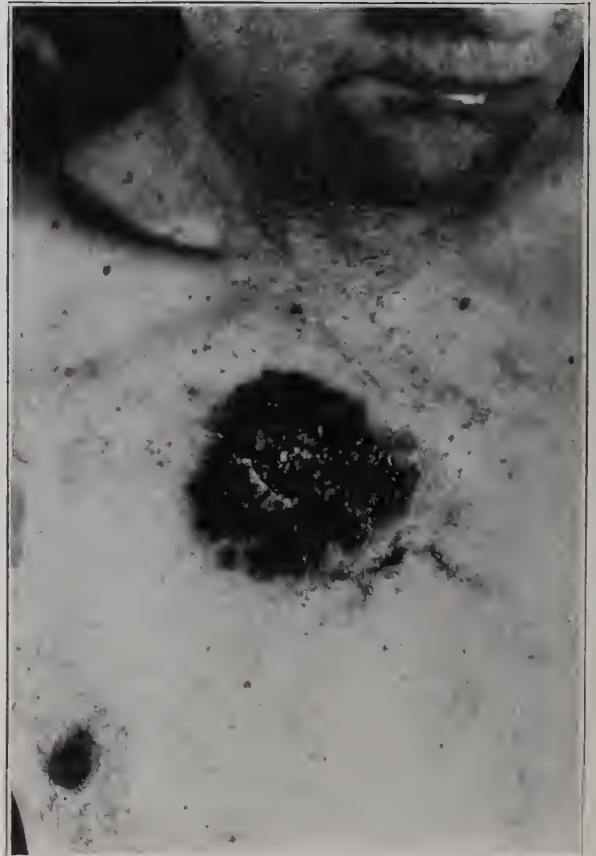


Fig. 3. Mr. McC., aged 59 years, admitted to hospital April 29, 1931. Had a lesion of psoriasis fifteen years ago, at same site. Lesion treated by acid. Lesion has increased slowly. Biopsy—Non-keratinizing epithelioma. Treated twice.

increased slowly in size. He had two applications of x-ray. Biopsy showed non-keratonizing epithelioma (Figs. 3 and 4).

CARCINOMA OF THE RECTUM

Quick of the Memorial Hospital, in reporting his results in carcinoma of the rectum, states that Mayo has 33 per cent three-year cures, and 25 per cent five-year cures. Remington has 22 per cent, and Lusk has 16 per cent three-year cures, all from surgery. Quick has treated 162 patients with radium, of whom only fourteen were well four years later. Pancoast, in a discussion of Quick's paper, reports only four patients well for three years, having treated fifteen cases.

Schreiner and O'Brien have treated over 200 cases of carcinoma of the rectum by radiation. Seventeen per cent of the most favorable cases; (of which they had twenty-three in number) patients with local and freely movable growths, were alive and well five years later. Only two patients of a total of 138 who had been treated for the type in which the growth had infiltrated around the rectum and was fixed were alive five years later. No patients with metastases, of whom forty-three were treated, lived five years.



Fig. 4. Mr. McC. Appearance on August 5, 1931.

On the other hand, surgeons are rather enthusiastic. Coffey⁶ states, "Cancer of the rectum and rectosigmoid, because of its anatomical location and the accessibility of its lymphatics, is one of the most curable of cancers," and reported 65 per cent five-year cures out of sixty-five cases.

These results are not very encouraging, and we are firmly convinced that radiotherapy in the treatment of carcinoma of the rectum can be of value only as a palliative measure.

CARCINOMA OF THE STOMACH

Radiotherapy in the treatment of carcinoma of the stomach has been very disappointing. The chief difficulty has been that we have been unable to deliver sufficient therapy into the tumor from the surface. Pfahler has been using interstitial therapy very recently but has published no results. Occasionally we obtain excellent temporary results. The following case will illustrate this point.

Mr. N. G., aged fifty-eight years, was admitted to the University Hospital June 11, 1930. His family and past history were not essential. In October, 1929, the patient first noticed difficulty in swallowing large particles of food. In January, 1930, he became tired easily, and weak. In February, 1930, there was a heavy, dull ache in the epigastrium, and occasionally a sharp shooting pain there. He had lost thirty-five pounds since February, 1930.

Laboratory Data: Urine contained 3+ sugar; hemoglobin 60 per cent; R.B.C. 1,900,000; Wassermann test negative. Free hydrochloric acid was absent even after histamine. Blood sugar was 316. Biopsy of the lower end of the esophagus on April 20, 1931, was diagnosed as adenocarcinoma of the stomach. The interesting feature is that the patient gained twenty pounds between June 11, 1931, and October 28, 1931. While he has not lost weight since, yet he is weaker and his examination on August 21, 1931, showed the stomach lesion to be progressing.

ERYSIPELAS

Erysipelas is a condition commonly seen in the practice of medicine. It may be of interest to report a series of cases of erysipelas, some of which were treated by x-ray, some by specific antitoxin, and some by local applications. Platon, Schlutz, and Collins⁷ report this series. Eighty cases were treated by means of x-ray, thirty cases treated by antitoxin, and thirty-five cases were treated by means of glycerine and magnesium sulphate packs. The temperature returned to normal in 1½ days in the cases treated by x-ray; in 2 2/10 days in those treated by antitoxin; and 3 4/10 days in those treated by packs. The symptoms had disappeared within two days of therapy after x-ray, and in 3 3/10 days after antitoxin; and two days after the packs. The disease extended in 21 per

cent of the cases with a mortality of 6 per cent in the x-ray group; an extension of 46 per cent of cases occurred in the antitoxin group, with a mortality of 6 per cent, and it extended in 68 per cent in the controls, with 23 per cent mortality. They conclude, "Our observations indicate that antitoxin and roentgen irradiation are both of definite value in the treatment of erysipelas. The roentgen-ray seems to be especially effective in inhibiting a spread of the disease and also in promoting a prompt subsidence of temperature and alleviation of symptoms."

GIANT CELL TUMORS

Herendeen, at the Memorial Hospital, has treated a large number of giant cell tumors by means of x-rays. He gives no statistics, but states, "From our experience at the Memorial Hospital it is estimated that about 25 per cent of all giant cell tumors recur after curettage." Also, "curettage is apt to destroy the mechanical barrier placed about the tumor by the tissues and it is this barrier which determines to a large extent the degree of malignancy and the effort at growth restraint." The following case shows that x-ray therapy is of value.

Miss K. R., aged thirteen years, entered the University Hospital on May 16, 1930, as an orthopedic case. Her family and past history were not essential. Seven months before her left knee had become slightly tender, more so on the inner side. The left knee soon became stiff and swollen. The patient had to use crutches for five months. The knee was better when not used. There were no night sweats and no loss of weight. There was no history of injury.

Laboratory Data: Von Pirquet test was moderately positive. Hemoglobin was 85 per cent; W. B. C. 8200.

Progress: The patient returned May 18, 1931, at which time weight bearing on the left knee was satisfactory. There was no pain. X-ray showed healing.

Even this brief review of current literature and the few cases presented, would indicate that radiation therapy, either alone or in combination with surgery, is of great value.

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DUODENAL DIVERTICULUM

Review of Literature and Report of Three Cases
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Sheldon

HISTORY

The first case of duodenal diverticulum to be diagnosed before operation and by x-ray examination was reported in 1912 by Baron and Barsony. Before that time the condition was considered of anatomic interest only, owing to the impossibility of establishing a clinical diagnosis on symptomatology. Since that time, however, numerous cases have been reported, especially in this country and in Germany, and it is now estimated that about 1 per cent of all gastro-intestinal examinations reveal the presence of single or multiple, small or large diverticula.

Case¹ in 1920 reported finding 85 cases in 6,847 barium meal examinations; Polgar² in 1927 reported his experiences in seventeen cases; Turco³ in the same year described three cases; Albrecht⁴ stated that duodenal diverticula are rather frequent and himself diagnosed two clinically, later confirming the diagnosis by x-ray; Golob⁵ in 1928 discussed the Roentgen ray findings and added two further cases. Besides these, many others have been reported and discussed, but the first typical case of duodenal diverticulum is accredited to Morgagni, whose report goes back as far as 1761⁶.

CLASSIFICATION

At present two main classifications exist. The first divides duodenal diverticula into congenital and acquired types and then subdivides these into true and false, according to whether there is or is not a protrusion of all the layers of the duodenal wall (Morrison).

The roentgenologist and the clinician, however, cannot distinguish between "true" and "false" and the author therefore feels most strongly that the classification suggested by Polgar² is better adapted for the use of those who study this condition *in vivo*, his division of duodenal diverticula being "genuine diverticula" and "pseudodiverticula."

ETIOLOGY

According to this classification, the genuine diverticula are congenital in origin, though some intrinsic factor has taken part in the actual development of the diverticulum. In the walls of many diverticula of the second or descending part of the duodenum there have been found embryonic rests of pancreatic tissue and it has been argued that these small auxiliary pancreatic cells have caused a local weakening in the intestinal muscula-

ture which has, in later life, developed into a diverticulum by herniation. Then, too, most of the duodenal diverticula develop on the greater curvature of the duodenum, in the duodenal circle. All anomalies of the vascular system occur in this circle and such anomalies have a weakening effect on the muscle wall, thus predisposing that area to diverticulosis. In fact, any point of entry or

are located on the duodenal bulb. Genuine diverticulum of the bulb is rare, comprising only 2 per cent of all duodenal diverticula.

AGE AND SEX

There is no difference in the frequency with which duodenal diverticulum is found in the two sexes; but it is a generally conceded fact that most diverticula are found in patients past middle age. Although cases have been reported in patients as young as thirty-six and in several under forty, yet by far the greater majority are over fifty. This age incidence is due to the reduced resistance of the muscle tissue in old age, permitting a congenital defect to manifest itself as something more than its previous potential weakening.

SIZE AND NUMBER

Diverticula have been reported varying in size from that of a millet seed (seen after death or during operation) to that of an egg. The latter may be misleading, as nearly all diverticula are



Fig. 1. Case I. Five minutes after meal.

exit of a vessel is bound to cause some potential weakness of the surrounding musculature. A third factor is the presence of the papilla of Vater, the entrance into the duodenum of the biliary and pancreatic ducts, which brings another weakened area into the circle.

The above may be called the real or congenital causes of genuine diverticulum; the immediate or accessory cause is increase in the intra-intestinal pressure which, in turn, may be due to intestinal catarrh, accumulation of gas from digestive disturbances, duodenal and gastric ulcers or malignant growths. Thus it will be seen that the presence of a diverticulum usually means that the clinician should suspect other pathology.

The main etiologic factor in the development of a pseudodiverticulum is the weakening effect of active or healed ulcers on the musculature of the duodenal wall (figs. 1-3). Rarely is a pseudodiverticulum the result of a broken or cirrhotic carcinoma of the pancreas involving the duodenal wall. Thus, it is seen that most pseudodiverticula



Fig. 2. Case I. A series taken 10-15 minutes after meal.

round in shape and seldom, if ever, is an oval one seen.

Some 50 per cent of the diverticula reported are pedunculated. Oehnell states that 75 per cent of all diverticula show retention of their contents with a resulting diverticulitis or imminent risk of diverticulitis.

Most of the diverticula reported have been single

in number, although it is stated that those of the duodenal bulb often appear in pairs. Bastian⁷ reported a case of multiple diverticulosis in a woman aged sixty-five, where there were five diverticula of various sizes in the descending and lower limbs of the duodenum. Weiss⁸ described a case in which "the smallest were the size of a hemp seed, the largest were the size of a plum to

of fullness, pressure and pain in the epigastrium which may have persisted off and on for years. Sometimes there is an actual spasm after a meal, with no relief until vomiting occurs. Some writers say that there are intervals as long as six months with complete relief from symptoms; others say that there is no cessation of symptoms until the condition has been corrected by surgical intervention. In two of the cases which the author reports there has been relief from symptoms for several months at a time after the patients were placed on a low fat diet and intestinal antiseptic medication. One patient had a low free acid content and the addition of hydrochloric acid to her medication assisted in alleviating the symptoms.

There may be attacks of diarrhea, with little or no pain, as the major symptom. There is often



Fig. 3. Case I. Re-examination after 24 hours.

that of a walnut, the number of which could hardly be determined" on direct examination at the operation. In 1928 Heidecker⁹ reported a case of multiple duodenal and jejunal diverticulosis and said, "The diverticula, approximately thirty in number, were in the insertion of the mesentery and without exception in points of entrance vessels." Similar cases have been reported in which as many as 400 diverticula have been counted, all located at the mesenteric attachment, consisting of prolapse of the mucosa passing through the sheaths of veins. This, of course, includes the number of diverticula in both jejunum and duodenum.

SYMPTOMS

It is generally conceded that the symptomatology is vague and that a correct diagnosis cannot be made without the aid of the x-ray or by exploratory surgery for a condition other than diverticulum.

There are obscure abdominal symptoms, often with the ulcer syndrome, with which this condition is frequently associated. There is a feeling



Fig. 4. Case II. Five minutes after meal. Note gas filled diverticulum.

no pressure pain which may readily be due to the fact that the diverticulum is so frequently buried in the pancreas or to the fact that there is no diverticulitis present.

The gastric acid values appear to vary in individual cases, cases being reported with marked hypacidity, normal acid values, or even achlorhydria.

COMPLICATIONS

Diverticulitis is the commonest and, perhaps, the most serious complication. According to Albrecht⁴, "as long as there is no tendency to retention, the diverticula are harmless. Diverticulitis is a serious disease leading to hemorrhage, abscess, gangrene, perforation or penetration into the neighboring tissue. The inflammation is easily

those cases which empty normally with the stomach and duodenum can therefore be counted as "innocent" and free from suspicion of potential grave disturbances. The advanced age and general debilitated condition of the patient may increase the hazards of surgery and in such cases medicinal and dietetic treatment should be carried out indefinitely to minimize the equally hazardous possibility of infection.

There exists a controversy as to whether or not duodenal diverticula are often or seldom complicated by gastric or duodenal ulcer. Polgar,² in reporting 17 cases, states that "in two cases, in addition to the genuine diverticulum, direct signs of peptic ulcer were demonstrated." Further on he says, "Coincidence of ulcer and diverticulum seems to be rare. Oehnell is the only author who mentions such cases." Bastian⁷ states that "the



Fig. 5. Case II. Four hours after meal.

propagated to the pancreas" with a resulting pancreatitis.

Again, diverticulitis may lead to a peridiverticulitis which, by direct spread, causes an ascending infection of bile ducts and gall-bladder (cholangitis and cholecystitis). If such a gall-bladder be extirpated, the symptoms are likely to continue while the primary diverticulitis is left untreated.

Duodenitis, gastritis and pancreatitis may develop from similar spreading infection, but the important fact is that the diverticulitis is the primary condition.

Earlier in this paper it was quoted that 50 per cent of all duodenal diverticula were pedunculated and that 75 per cent showed retention of their contents beyond the physiologic emptying time. From that it will be seen that some of the non-pedunculated diverticula are capable of retention and are potential cases of diverticulitis and the more serious sequelae following that disease. Only



Fig. 6. Case II. Twenty-four hours after meal. Barium still outlining diverticulum.

simultaneous occurrence of ulcer and diverticulum has repeatedly been observed." It is certain that not all cases of potential diverticula with the weakened musculature go on to diverticulosis any more than every case of persistent congenital sac develops a typical hernia; but, given the adjuvant cause, increased intra-intestinal pressure from one or other of its many sources, the potential diverticu-

lum would tend to develop into the manifest diverticulum as would the potential hernia on grave and adequate increase of intra-abdominal pressure, be it from over-exertion or coughing or other cause. With this axiom as a basis it is easy to realize that a case of duodenal or gastric ulcer with the attendant increase in tone and spasticity would tend to initiate a herniation or protrusion

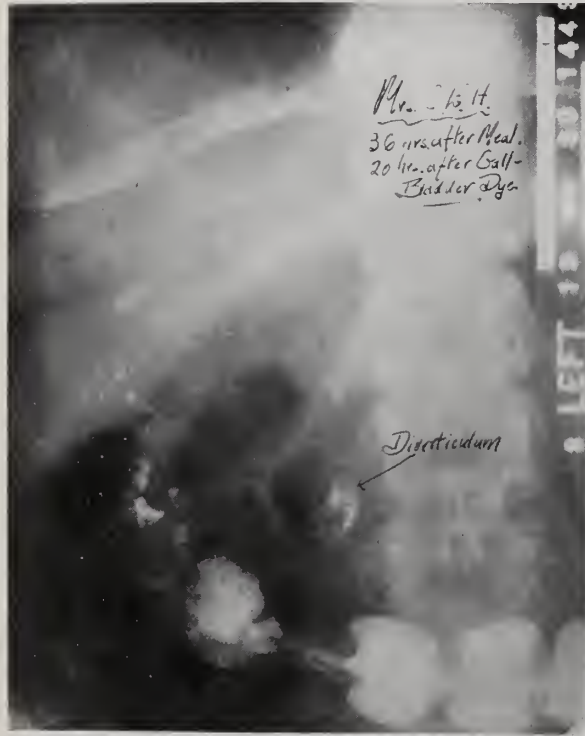


Fig 7. Case II. Thirty-six hours after meal; 20 hours after keraphen. Still much barium in diverticulum.

of the mucous and submucous coats through the congenitally weakened musculature, whether that weakening be due to embryonic pancreatic cell rests, a weakened papilla of Vater or weakened musculature surrounding anomalous or anatomically correct vessels in the duodenum. It is equally obvious that the weakening effect upon the duodenal wall near the seat of ulcer would give an added tendency toward pseudodiverticulum of the first part or bulb of the duodenum and it is for this reason that all or most diverticula in this part are accompanied by ulcer.

X-RAY SIGNS

When once seen either fluoroscopically or radiographically, the x-ray signs of diverticulum are so striking as never to be missed. It is the diagnosis of the first case that is the main difficulty. Duodenal diverticulosis has usually been considered and written about as so rare a condition that

the diagnostician has almost forgotten its possibility and the true nature of the first case he encounters bursts upon him so suddenly that it is almost breath-taking. The reaction is then to search diligently through all antecedent gastro-intestinal x-ray films to see if, by any mischance or unfamiliarity, a similar and equally interesting case had been passed up in the search for the more common ulcer or malignant pathology.

The shape of the shadow cast by the gas- or barium-filled diverticulum is characteristic. No ordinary intestinal shadow is ever so round. Then, both fluoroscopically and radiographically the pedicle, if there be one, can be seen at one time or another. The author is a firm believer in serial radiography and has devised a serialograph at little cost which can be used with the Bucky diaphragm and will give six exposures on a single



Fig. 8. Case II. Re-examination 48 hours after meal shows gas and a little barium in diverticulum.

14 by 17 inch negative. In this manner negatives can be taken every half-minute or minute and the persistence of a shadow on all six exposures rules out "accident" and "photographic error" in all cases (see figures 2 and 10). Typical of diverticulum is the pedicle with its mucous membrane folds entering and leaving the diverticulum. The outline of the shadow of the diverticulum is very

sharp and definite and, though not always filled with the opaque material, may be traced out in supernatant gas and fluid. When there is retention, it is relatively easy to visualize the diverticulum, as the opaque medium remains for several hours or even days in more or less concentration within the diverticulum. Its proximity to the region of the gall-bladder may cause one to jump to the

so shaped owing to extrinsic pressure (figs. 1-3).

It is obvious that the longer a diverticulum retains its contents, the more serious is the condition and the more the probability of there being the grave complication of diverticulitis and its even more serious sequelae.

DIFFERENTIAL DIAGNOSIS

This is usually easy. As stated above, the shadow could be mistaken at first glance for a gall-bladder full of stones of irregular calcification. A broad focus x-ray tube would tend to add to the confusion by blurring the outline and thus rendering the differential diagnosis less easy.

Barium filling a gall-bladder after artificial or pathologic cholecystogastrostomy or cholecystoduodenostomy is less easy to differentiate as, in this case, a pseudodiverticulum is actually formed. One must here be guided by the location of the barium-filled sac on the lesser curvature where diverticula are rare, the lack of mucous mem-



Fig. 9. Case III. Five minutes after meal.

diagnosis of visualized gall-stones; but more careful study of the negative will dispel such an illusion.

Diverticula in the ascending limb of the duodenum may be obscured by the dense barium in the filled stomach. Fluoroscopic visualization in these cases is effected by lateral and semilateral rotation of the patient. This alone is a good reason why every gastro-intestinal case should be viewed from directions other than the usual anteroposterior, at least in fluoroscopy.

Keith's sign, peristalsis in the diverticulum, is of minor or no importance as, for practical purposes, all diverticula can be considered as muscle-free and therefore incapable of peristalsis. Those which are not buried in the pancreas can conceivably alter their shape to some extent with alterations in intra-abdominal pressure, depending mostly on the position of the diaphragm. This is most commonly seen in diverticula of the bulb and many of the bifid diverticula in this region are



Fig. 10. Case III. A series 10-15 minutes after meal.

brane folds entering and leaving the pedicle and the very important antecedent history of the patient.

Large ulcer niches in the bulb of the duodenum will not tend to change shape on alterations of intra-abdominal pressure as will diverticula in that region. When an ulcer has actually ruptured through the wall of the duodenum and formed a

sac of its own, the resemblance to a diverticulum is complete and, of course, a state of pseudodiverticulosis exists and further differentiation is impossible.

Entrance of barium into the first section of a dilated common bile or pancreatic duct and its retention after emptying of the duodenum can resemble small diverticula very strongly, especially with a broad focus tube; but here again, the shadows tend towards elongation, whereas those of diverticula are essentially round.

REPORT OF CASES

Case I: Mr. H. H., aged forty-five, gave the history of having had a sharp, gnawing pain in the epigastrium with vomiting two years previously. The attack lasted two weeks. The year following he had a similar attack. The pain came on about three hours after eating and was relieved only by vomiting. He also discovered that eating would relieve the pain temporarily. Following his second attack the trouble persisted with short periods of relief. He was put to bed on a soft diet in the spring of 1929. While in bed he felt better, but shortly after getting up, his trouble started again. Thirteen years before he had had an operation for subacute appendicitis.

Present Condition. At the time of examination in September, 1929, the patient was having attacks of epigastric pain coming on in the forenoon and afternoon three hours after eating. He never awakened at night with pain. He always felt better when lying down. He had burning in the stomach, with belching of sour fluid, but there had been no vomiting since May, 1929.

X-ray examination on November 25, 1929, showed a grossly deformed duodenal cap seen both fluoroscopically and radiographically in a series of exposures at one minute intervals (figs. 1 and 2). The lesser curvature of the duodenum showed several niches of ulcers. On the greater curvature of the duodenum there was a well formed pouch of a duodenal diverticulum. This was persistent throughout seven exposures. A second meal administered after twenty-four hours (fig. 3) confirmed the diagnosis of multiple duodenal ulcers with diverticulum.

This patient was placed on ambulatory ulcer treatment (having refused operative interference) with marked temporary improvement of all subjective symptoms.

The interesting facts in this case were the periodicity of the attacks and the ease and comfort experienced when the patient lay down. Undoubtedly in the recumbent position it was easier for the diverticulum to empty.

Case II: Mrs. C. E. H., aged sixty, com-

plained of attacks of diarrhea with vomiting occurring towards evening with practically no pain. These attacks would last about two weeks and then subside, only to recur in three to four weeks. Her physical findings were negative and no tender spots were elicited on abdominal examination.

X-ray report on November 18, 1930, stated that fluoroscopically, a well formed though irritable duodenal cap was visualized. The cap was deviated posteriorly, as from gall-bladder pathology (fig. 4).

There was a diverticulum the size of a golf ball of the descending limb of the duodenum. This was seen in all exposures from five minutes to forty-eight hours after the meal, showing a very slow emptying time (figs. 5-8).

Examination of the gall-bladder showed pathology of that viscus also.

As in the previous case, there was a definite periodicity in the attacks complained of and also the vomiting. Though this patient did not stress the fact that she was better when recumbent, she stated that she always felt better at night (when in bed).

She has been on a low fat diet with hydrochloric acid medication after meals for the past fifteen months (having refused operation) and her spells, though not entirely relieved, now come on at rare intervals and then only after a dietary indiscretion. There is little doubt that this patient has diverticulitis and that the spread of a peridiverticulitis has caused an ascending cholangitis and cholecystitis.

Case III: Mr. B. K., aged seventy-one, complained of distress after food with periodic attacks of vomiting and loss of appetite. He had lost about twenty-five pounds in weight within four months. Much of his time was spent lying down to relieve the gastric distress. There was no free acid present in the gastric analysis.

X-ray examination on December 21, 1929, showed the stomach to be steer-horn in shape with normal fundus and tubular pars pylorica through which the peristaltic waves fail to pass, typical of malignant, non-obstructing pathology in that region. There was a "stove-pipe" pylorus and rapid emptying of the stomach. Owing to the gastric pathology, the duodenal cap was not visualized; but there was present a diverticulum the size of a walnut in the descending limb of the duodenum which did not retain the opaque medium longer than the rest of the duodenum (figs. 9 and 10).

The serious gastric pathology (from which the patient has since succumbed) tended in this case, to obscure the symptoms of diverticulitis, though it is very likely that this complication was not

present, as evidenced by the rapid emptying of the diverticulum.

CONCLUSIONS

1. Duodenal diverticulum is relatively common, being present in approximately 1 per cent of all gastro-intestinal x-ray examinations. Three cases are reported in a series of 400 such examinations over a period of three years.

2. Polgar's classification into genuine and pseudodiverticula is advanced as the most logical for the clinician, the roentgenologist and the surgeon, leaving histologically correct classifications to the pathologist.

3. The genuine diverticulum is, etiologically, due to a congenital defect or weakness with superimposed pathology causing increased intra-intestinal pressure. The pseudodiverticulum is primarily due to pre-existing pathology which weakens or breaks through that immediate portion of bowel.

4. Practically all diverticula occur in patients past middle age.

5. Diverticula vary considerably in size and number.

6. Constant symptoms are (a) the periodicity of the attacks, (b) the feeling of well-being in the morning, with pain and vomiting coming on towards evening, (c) the relief from symptoms on lying down. It is emphasized that these and other probable symptoms are due to the superimposed diverticulitis.

7. The complications and not the anatomical disturbance cause all symptoms, the diverticulum, *per se*, being innocent.

8. The x-ray signs alone are diagnostic of diverticulum and also establish the diagnosis of diverticulitis.

9. Any slowly emptying diverticulum which is probably complicated by diverticulitis is best treated surgically, other things being equal.

10. Three cases are presented; (a) a case of pseudodiverticulosis of the first part of the duodenum with ulcer; (b) a case of diverticulosis with diverticulitis and ascending biliary infection; (c) a rapidly emptying diverticulum of the descending limb of the duodenum in a case of malignant stomach.

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POLIOMYELITIS*

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The subject of poliomyelitis is too large to discuss in detail but there are important facts and advances of interest. The reasons for presenting this subject are that poliomyelitis remains endemic in this state and that best results in treatment follow early diagnosis.

HISTORY

Poliomyelitis was first described in 1787 by Underwood.¹ The first extensive epidemic occurred in Sweden, and was studied and reported in 1887 by Medin.² One of the first epidemics in this country, reported by Colmer,³ occurred in West Feliciana Parish in Louisiana in the fall of 1841. The next important epidemic, reported by MacPhail⁴ and Caverly,⁵ occurred in Vermont in 1894. The real advances in the knowledge of poliomyelitis began with Landesteiner and Popper⁶ reporting transmission of the disease from man to monkey in 1909. Within fourteen months reports of successful transmission of the disease from man to monkey were made by Flexner and Lewis,⁷ Leiner and Von Weisner,⁸ Landesteiner and Levaditi,⁹ Romer,¹⁰ and Strauss and Huntoon.¹¹ In 1913 Flexner and Noguchi¹² described and cultured the so-called globoid body which they believed to be the cause of poliomyelitis. This micro-organism was again described later by Amoss¹³ and others. At present they believe the globoid body is not the cause of the disease but that it carries the causative filtrable virus.¹⁴ In 1916 Rose-now¹⁵ and others recovered from acute cases of poliomyelitis, a polymorphic streptococcus which they think is the etiologic agent.

EPIDEMIOLOGY

Amoss¹⁴ briefly summarizes the facts and present beliefs regarding the epidemiology of poliomyelitis as follows:

"(1) So far as we know, the only reservoir of the disease is man. No animal except the ape is susceptible.

"(2) The disease is endemic the world over, occurring in the north and south, with periodic epidemic outbursts, particularly in the northern latitudes.

"(3) All ages are susceptible. The most susceptible age group is from two to nine years; in rural epidemics, a larger percentage of older persons may be attacked than in urban outbreaks.

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"(4) The mortality varies from 10 to 40 per cent, determined mostly by the frequency of those cases of chance localization called the bulbar type.

"(5) Epidemics occur usually during the summer or fall, but there have been a few winter outbreaks. Thus poliomyelitis is a warm weather disease of colder climates.

"(6) Only a small percentage of cases may be traced directly to a preceding case. Poliomyelitis is highly communicable, but selectively, with an extremely low attack rate (1-200) even in epidemics of great proportions.

"It is probable, but by no means definitely settled, that there is a gradual immunization, by sub-infective implantation, as in diphtheria, and that carriers play the great rôle in the propagation of the disease."

Numerous observers have called attention to the fact that although this disease seems to be transmitted through the upper respiratory tract, it is known to occur when intestinal disturbances are prevalent.

Incubation period. The incubation period may be as short as two or as long as eighteen days, averaging often four to seven days.

Communicability. The period of communicability is apparently definitely in advance of the first symptoms. The virus was recovered in the nasal washings of a patient as early as six days before the onset of symptoms. Amoss¹⁴ and his associates believe that the virus begins to disappear from the patient at about twelve days and is usually absent by the twentieth day. Lucas and Os-good¹⁶ report a patient carrying the virus for over two years. They were able from time to time to recover the virus in the nasal washings and produce poliomyelitis in monkeys. It is probable that from the public health standpoint the prodromal period is more important than the stage of acute disease.

PATHOLOGY

Briefly it may be said that in poliomyelitis all lymphatic structures of the body are involved. The site of involvement in the central nervous system is in the perivascular or lymphatic space. The pathologic lesions found in man and in experimental monkeys are identical. In a considerable number of cases the peri-neuronal edema probably causes nerve cell damage by blocking the gaseous interchange to the cell. There seems no other plausible explanation for the dramatic recovery from paralysis which sometimes occurs. Burrows¹⁷ recently reviewed the pathology of cases studied in Baltimore in 1916. He suggests that from pathologic findings the disease should be named "acute lymphatic hyperplasia".

PATHOGENESIS

Flexner, Amoss,¹⁸ and their associates have done much experimental work on the pathogenesis of poliomyelitis. In producing the disease experimentally in monkeys by intranasal applications of the filtrable virus they traced the path of that virus. The virus was found first in the olfactory lobes, then in the spinal fluid and later in the cord and brain stem. In producing the disease by intravenous injection of the virus, it was first detected in the spinal fluid and apparently entered the cord at the junction of the pia with the posterior root ganglia. Several points in their work are worthy of special mention. Two distinct barriers to the passage of the virus into the central nervous system have been noted experimentally. The first barrier noted by Amoss and Taylor¹⁹ lies in the virus neutralizing power of the nasal secretion and the impermeability of the nasal mucosa. Individuals having acute or chronic rhinitis may have little or no neutralizing power in the nasal secretions. Nasal antiseptics or irrigants other than isotonic saline definitely increase the permeability of the nasal mucosa for the virus. Clinically interpreted, the use of nasal antiseptics during epidemics may actually render the person more susceptible.

The second barrier, described by Flexner and Amoss,²⁰ lies in the meninges and choroidplexus. Monkeys were infected by an intranasal pack of poliomyelitis virus left in over night. These monkeys all developed the disease. If the packs containing the virus were left in the nares only two hours none of the animals developed poliomyelitis. In monkeys previously given an intraspinal injection of horse serum or Ringer's solution the two hour nasal pack of virus always produced poliomyelitis. The same results were shown in intravenous route experimental infection. In other words, anything producing an aseptic meningitis will break down the meningo-choroid barrier and make the individual more susceptible to the poliomyelitis virus. Clinically speaking, it is possible that by intraspinal injection of horse serum or by a bloody spinal puncture one may jeopardize a patient otherwise able to cope with a virus which has not passed the meningo-choroidal barrier. Along the same line of thought Helms²¹ advises that lumbar puncture should never be performed unless one is ready to give convalescent serum immediately.

DIAGNOSIS OF PREPARALYTIC POLIOMYELITIS

The characteristic sign of poliomyelitis is the paralysis. When that stage has been reached, our opportunity to be of greatest service to the patient has passed. Poliomyelitis is difficult to diagnose in the preparalytic stage. Alertness, constant

suspicion and vigilance must ever be present, if preparalytic poliomyelitis is to be diagnosed. It has been shown that during epidemics the preparalytic cases may be diagnosed with considerable accuracy. Preparalytic poliomyelitis is sometimes divided into two types, the so-called "dromedary" and the true preparalytic.

The dromedary type in epidemics makes up about 15 per cent of the cases. The dromedary type is characterized by two rises in temperature before the onset of paralysis. These patients have fever, headache, gastro-intestinal disturbance and malaise, followed in a few days by an absence of all symptoms. About the fourth or fifth day the symptoms and signs of true preparalytic disease occur, followed by paralysis.

Aycock and Luther²² give an excellent description of preparalytic poliomyelitis as it occurs in about 85 per cent of cases as follows:

"The patient is taken sick with fever, headache and gastro-intestinal disturbance, which usually consists of vomiting and constipation. Drowsiness and a desire to be let alone are also frequently observed. While these symptoms are fairly constant, the absence of one or more does not rule out the disease, and they are not characteristic enough in themselves to warrant a diagnosis.

"It is, then, the physical signs to which one must look for diagnosis, and these make the early picture of infantile paralysis a fairly characteristic one. On observation the child seems prostrated to a greater degree than the temperature, which is usually under 102 F., would indicate. The face is flushed, the expression is anxious, and there is frequently pallor about the nose and mouth. The throat is mildly injected, but not enough in itself to account for the child's condition. The pulse is usually rapid out of proportion to the temperature. The rest of the physical examination is negative, except for that portion which deals with tremor when the child moves, which may be very striking. There is a distinct rigidity of the neck; however, this is not as marked as that usually seen in meningitis. The patient tilts the head on the neck but does not bend the neck on the shoulders. As a result, the head can be brought about half-way forward, when resistance is encountered, and the child complains of pain. More constant and more characteristic than the stiffness of the neck is a stiffness of the spine. This is best brought out by having the patient sit up in bed and try to bend the head down onto the knees. The average child, ill with other infections, is very flexible and has no difficulty in doing this. If these patients bend forward at all it is from the hips, with the spine held rigidly. Many of them cannot assume a comfortable sitting position without propping them-

selves up on their arms. Anterior flexion of the spine often causes a drawing pain in the lumbar region. Kernig's sign is not usually marked at this stage, but the deep reflexes are frequently hyperactive rather than diminished, as they are later. A cerebral tache is almost always present, not infrequently becoming a purplish, irregular blotchy line a half-inch or more in width. It is the presence of these signs and symptoms which justifies a probable diagnosis of anterior poliomyelitis and calls for the final step in the diagnosis.

"This step is examination of the spinal fluid. The fluid is usually under moderately increased pressure (from 150 to 200 mm. of water). Macroscopically the fluid appears to be clear, but when viewed by transmitted light it presents a faint haziness which has been described by Zingher as a 'ground glass' appearance. There is an increase in cells, usually between 50 and 250, but occasionally as high as 700 to 800, or as low as 20. These cells may be largely polymorphonuclear early, but later are lymphocytes. There is an increase in globulin."

TREATMENT OF PREPARALYTIC POLIOMYELITIS

The use of human convalescent serum in the treatment of preparalytic poliomyelitis is based on conclusive experimental evidence. Intrathecal use of convalescent serum was advocated by Flexner and Lewis in 1910.²⁴ It was first used by Netter in 1911.²⁵ Aycock and Luther²⁶ used it intrathecally and intravenously. Shaw and Thelander²⁷ reported its intramuscular use with good results. During the Manitoba²⁸ and Ottawa²³ epidemics the intramuscular route was used almost exclusively with apparent satisfactory results. In Ottawa dosages of 25 cubic centimeters were given intramuscularly. Following this the patients were put to bed for two weeks and kept on light diet. Some cases were given second injections. Little serum sickness was noted.

SERUM THERAPY STATUS

Flexner²⁹ and his associates demonstrated that when monkeys were inoculated with a mixture of potent poliomyelitis virus and convalescent serum, poliomyelitis did not appear. Likewise, they showed that administration of convalescent serum intrathecally as late as twenty-four hours after the giving of a potent virus protected the animals from the paralysis. This certainly seems to be conclusive experimental evidence of the value of human convalescent serum in the treatment of preparalytic poliomyelitis. The value of convalescent serum in human patients is always difficult of interpretation, since one can never predict which patients will develop paralysis.

As examples of convalescent serum therapy the

results of three groups of observers in different years are presented. Aycock³⁰ and others submit this table covering the 1927 epidemic of poliomyelitis in Massachusetts.

TABLE I
Case Fatality Rates for Untreated and Treated Cases 1927

	Number of Cases	Deaths	Case Fatality Rate
All Cases	1,189	166	13.9
Untreated Cases	1,083	165	15.2
Treated Cases	106	1	0.9

They employed convalescent serum in 106 of the 1,189 cases reported. In the untreated cases there were 166 deaths and in the treated cases one death. McEachern²⁸ and others report results in the Manitoba epidemic of 1928 as follows:

TABLE II
Results in Treated and Untreated Cases

Group	Number of Cases	Number Completely Recovered	Per Cent Completely Recovered	No. Showing Residual Paralysis	Per Cent Residual Paralysis	Deaths	
						No.	%
I.....	57	53	93	4	7	0	0
II.....	17	16	94	1	6	0	0
III.....	33	7	22	15	45	11	33
IV.....	54	14	26	34	63	6	11

- Group I—One dose intramuscular serum in preparalytic stage.
- Group II—Two or more doses of serum by various routes (preparalytic stage).
- Group III—Serum given after onset of paralysis.
- Group IV—No serum given.

Group I had one dose of convalescent serum intramuscularly in the preparalytic stage; 93 per cent recovered completely and 7 per cent showed residual paralysis. Group II had two or more doses of serum by various routes in the preparalytic stage; 94 per cent recovered completely, while 6 per cent showed residual paralysis. Group III were given serum after the onset of paralysis; 33 per cent died and 45 per cent had residual paralysis. Group IV received no serum; 11 per cent died and 63 per cent had residual paralysis.

Lomer and Shirreff²³ in the Ottawa epidemic in 1929 tabulated their results as follows:

TABLE III

	Number	Percentage
Total cases treated	141	
Total cases recovered completely.....	109	77.4
Total cases recovered with paralysis....	29	20.5
Number dying with paralysis.....	2	1.4
Number dying without paralysis.....	1	0.7

Deducting the twenty-six cases having paralysis on admission, there were 115 cases. Of these

	Percentage
109 recovered completely	94.8
5 recovered with paralysis (2 of which were very slight)	4.3
1 died without paralysis.....	0.9

The first part of the table takes in the whole group and the second part of the table gives the

results excluding the cases paralyzed on admission to the hospital. Of this group, 94.8 per cent made complete recoveries.

Rosenow³¹ has isolated a streptococcus which he believes to be the cause of poliomyelitis. Using this organism he developed a horse serum and submitted experimental and clinical reports of its value. Experimental work has not been confirmed and the clinical evidence has, perhaps, not been entirely convincing. Olitsky, Rhoads and Long³² tried to substantiate Rosenow's work, using the streptococcus isolated from the spinal fluid of one of Rosenow's cases. This streptococcus corresponded essentially with one isolated from the brain of a normal monkey and with one recovered from the air of the laboratory. Normal monkeys and

monkeys which had recovered from poliomyelitis when injected with this streptococcus developed purulent meningitis. They concluded that their findings did not support the view of Rosenow's streptococcus being identical with poliomyelitis virus.

CONCLUSIONS

The last words regarding poliomyelitis remain unspoken. From the present predominating evidence one may conclude:

- (1) Poliomyelitis is caused by a filter-passing virus making its entrance and exit through the upper respiratory tract.
- (2) Use of nasal antiseptics or procedures causing aseptic meningitis, experimentally, break down the natural barriers to the entrance of the virus.
- (3) Diagnosis in the preparalytic stage is of great importance. Lumbar puncture is often helpful in diagnosis.
- (4) Convalescent poliomyelitis serum is of value in the treatment of preparalytic disease.
- (5) No satisfactory treatment for paralytic poliomyelitis has been presented.

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NOISE AND SOME OF ITS ILL EFFECTS

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NOISE DEFINED

Funk and Wagnall's Dictionary defines noise as "a sound of any kind, but especially of a confused or disagreeable kind; a din." Some of its synonyms are: blare, clamor, clatter, din, hubbub, jangle, outcry, racket, rattle, war, tumult and uproar.

"So all day long the noise of battle rolled,

Among the mountains by the winter sea."

—TENNYSON.

In acoustics noise is defined by Steele as "the confused sound obtained by the discordant mingling of a number of distant vibrations." The difference between noise and music is that between irregular and regular vibrations.

HISTORY

Many thousands of years ago man became differentiated from the other animals about him, by the utilization of tools. While they were very crude in the beginning, they enabled him to overcome his enemies, secure food and live with a little less effort. It was by tools, therefore, that he began figuratively, as well as literally, to make some noise in the world. It seems strange to us now that so

many centuries passed with so little improvement in the implements and machinery with which man extended the power of his arm and gained mastery over nature. Each generation seemed perfectly content with what it had inherited from the generation preceding.

It was really not until the latter part of the eighteenth century that the world seemed to awake to the idea that the forces of nature might be turned to the practical uses of man. Water power was used first, but this soon gave way to the more efficient power of steam, and then later was added the wonder-working power of electricity. Steam railways began to traverse the land, steamships to plow through the waters of rivers, lakes, and seas. The cotton gin and spinning jenny were invented, sewing machines appeared in every household, and harvesting machines on every farm. A new age—the age of machinery—had come into existence.

Every machine, with its improved methods of production, and every invention turned to use for the manufacture of goods, or the transportation of man and material, brought also into existence more and worse noises. In the excitement of newly gained wealth and power, little attention was paid to the pernicious noises which accompanied.

Noises and the annoyances caused by them are by no means a phenomenon of our own age. Ever since man began to gather in large cities, the matter has been recurrently considered by philosopher and administrator. There is evidence that definite steps to abate noise were taken by the Greeks several centuries before the Christian era. We know that the cultured Greeks at Sybaris, who are reputed to have been more than usually sensitive to discomfort, took some thought in the matter. Professor Henry J. Spooner, in an article published in the *Guildhouse Monthly*, London, November, 1929, called attention to the fact that this city, founded in 720 B. C. in southern Italy, became great and wealthy perhaps in part because of the regulations enforced by the authorities prohibiting industrial noises in the residential areas, and providing for the zoning of the city. The Romans, who prided themselves at the time on their hardihood, sneered at these sensible regulations as signs of effeminacy and invented the tale about a Sybarite who could not sleep because a petal was crumpled in his bed of rose leaves. Professor Spooner noted that in more recent times, noise had been the cause of much mental distress among persons whose work depended in a great part upon the use of their brains. Carlisle dreaded the sound of a cock crow and had a sound-proof room made to work in. Schopenhauer, the famous German philosopher, was tortured by the crack of the cartier's whip and believed that noise is the true murderer

of thought. Herbert Spencer, the great thinker, was so much affected by noise that he used to plug his ears with wool. He often said that you might gauge a man's intellectual capacity by the degree of his intolerance of unnecessary noises.

Mark Twain was another who found the noise of the city constantly annoying. The late Joseph Pulitzer added his voice to the rising chorus of protest against what many thinkers have come to regard as a menace to peace, contentment, health and effective work. The noise of cities has become axiomatic. Thousands of persons have learned to expect it as one of the necessary discomforts of gregarious living. They bear it under protest, and not without harm to their nervous systems, their hearing and their mental processes.

In the early and simple world, when man lived chiefly by the pursuit of agriculture, the sounds of the world were almost entirely those which emanated from animate and inanimate nature. It has always been observed that the sounds of inanimate nature are good for the body and refreshing to the soul. However unpoetic the mind, one can hardly fail to experience pleasure in the sound of rustling leaves, or of flowing water. There is no doubt that much of the charm of music is derived from the conscious or unconscious suggestion of these elemental sounds and we find in this the best explanation of why music soothes and exhilarates the spirit. Scientifically considered, music is characterized by a succession of regular rhythmical vibrations—noise, by a medley of vibrations without order or uniformity.

The noise of the world may be roughly classified as originating from the following causes: (1) animate nature, (2) war, (3) building and construction, (4) traffic and transportation, (5) manufacture, (6) commerce and (7) communication.

Our forefathers who tilled the soil, hunted wild, and took care of domestic animals, were not altogether free from the annoyance of noises. The sounds emitted by animals have in the main two purposes, to attract mates, and to terrify enemies. The former are intended to be pleasing, and in truth we do not as a rule find disagreeable the cooing of doves, the neighing of horses, or the mooing of cows. The warbling notes of the songbird give almost universal delight. Much, however, depends on the time and place. The distant bark of a dog is sometimes good to hear, but coming from the throat of a hound dog in the neighbor's backyard, baying at the moon at two or three a. m., is a different matter. Likewise, the caterwauling of Mr. Tom Cat on the back fence, the bawling of a distressed calf for its mother, the yelping of a litter of small pups in the wee sma' hours of the morning, are not conducive to peace of mind or

serenity of soul. So, too, some of the mechanical devices, such as the radio and piano, which give delight during the daytime, cause much mental distress when heedlessly manipulated by some thoughtless neighbor on a summer's evening long past midnight.

War, since earliest times, has been a prolific source of noise. The noises of modern warfare are stupendous and overwhelming and their harmful effects fall upon friend more than foe.

The noises incident to construction are probably the most intense of all to which the modern city dweller is exposed, and of these the nerve racking, reverberating, deafening demon which is the worst offender is the riveting machine. Some attempts are now being made to remedy this evil, through experimentation with electric welding.

Vehicular traffic is now almost entirely a matter of automobiles and naturally, with over twenty millions of them in this country, their horns, sirens, whistles and bells are a prolific source of noise. The worst offenders are the heavy busses, vans and trucks, especially when running on solid tires with loose gears and chains, and with ear-splitting sirens or whistles open full blast. The noisiness of the city streets is tremendously increased by the clatter and clang of street cars, surface and elevated trains, subways and by low-flying, high-powered airplanes.

Noises referable to manufacturing are too numerous to mention, and we need but pause and recall the din of a trip through a modern automobile factory, sawmill, boiler factory, machine shop or steel mill, to get some idea of the attendant discord in our age of modern machinery.

As noises coming under the head of commerce, we should mention especially those connected with the collection and delivery of merchandise such as the throwing about of boxes, barrels and tin containers. The early morning call of the iceman, milkman, garbage man and ashman is particularly dreaded in some quarters. We must include here the weird call of the hucksters, the raucous shout of newsboys calling EXTRA! the bell ringing of scissors grinders, all noises with which most of us would willingly dispense.

The most recent increase in the noise of civilization is attributable to the coming into common use of measures for more rapid communication, the telegraph, the telephone and the radio. Of these the most notable is the radio. The click of the telegraph, or the ringing of the telephone seldom bothers anyone except those directly in the room, but the squeak and the squawk of the radio are often heard through the partition walls of apartments or carried out of the window to the

neighbor across the street or to people on the sidewalk below.

In Germany, the *Deutsche Gesellschaft für Gewerbe Hygiene* or German Society for Industrial Hygiene has formed a committee for studying and combating the noise attendant upon industry and has published and distributed a pamphlet on the cause and prevention of impaired hearing and on industrial noise. According to the pamphlet we learn: (1) "Noise can impair hearing by its intensity, as well as by its duration; noise is transmitted not only through the air, but also through the walls and floors of the workroom. A single strong sound impression, such as a whistle, explosion or stroke is especially injurious if it occurs suddenly or unexpectedly." (2) "The noise injures the most sensitive and vital parts of the organ of hearing, namely the auditory nerve endings in the cochlea." (3) "Not every human ear is injured by loud, continual industrial noise. The greater the power of resistance of the organism, and the healthier the organ of hearing, the less harmful is the effect of noise." (4) "An injury of the ear that is caused by a sudden and extremely loud sound (whistle, detonation), is noticed immediately by the injured person. A sensation of pressure is noticed; a ringing sound and earache develop. A strong blast of air sometimes causes bleeding and discharge of fluid from the ear. Impairment of hearing caused by continuous moderate occupational noise, develops gradually and is at first hardly noticed. In the beginning many workers do not feel the influence of noise in the workroom. Examination by an ear specialist often reveals the impairment of hearing in such persons who are not aware of their injury."

Dr. H. Clyde Snook, of New York City, Chairman of the Committee on the Relation of Noise to Accidents, with the aid of several eminent specialists in medicinal psychology and allied sciences, found that noise is a direct contributing factor in accidents, both street and industrial. The New York Committee on the Effect of Noise on Human Beings declared after a study of data so far available through research, that the continual pressure of strident sound to which New Yorkers are subjected tends to produce impairment of hearing; to induce harmful strain upon the nervous system leading to neurasthenic and psychasthenic states; to cause loss of efficiency of workers and thinkers, and finally to interfere so gravely with sound, refreshing sleep that rest is difficult and in some cases impossible.

In London, Sir Robert Armstrong Jones states that city dwellers are neurotic: that sleep is indispensable to the neurotic, who does the work of the

world, and that the noises most disturbing to sleep are unusual and sudden horns, exhausts, shrill vibrations, whistles and milk can deliveries. The Noise Commission of London believes that noise retards the efficiency of brain workers, and to other noises it adds that of barking dogs, street vendors, careless milkmen and whistling locomotives. It also believes that there is a difference between street and industrial noises. Street noises are more injurious because they are non-rhythmical. The body cannot become adjusted to them and they create tensions generating angry emotions, thereby adding to fatigue. The commission further believes that neurosis may be attributed to noises, just as in the case of shell shock. Dr. Tucker of London says: (1) "The ear can accommodate itself to states corresponding to all displacements from one to ten million in magnitude. The equipment of the ear making it continually adaptable to London traffic, unless all these sounds merge, as they do not, the portion of the ear which controls adaptation gets no rest." (2) "After a certain frequency of loud and recurrent noises, the accommodation muscles do not react. This lack of function due to noise leaves a breach in the protection of the ears and accounts for some of our fatigue at the end of the day." (3) "It is not the steady roar of the traffic but its various noises which impose the chief strain on the ear." (4) "Wittmack has proved that some auditory organs are completely destroyed by prolonged exposure to loud noise, and he sees in this the positive development of deafness which often begins with an inability to recognize tones."

Another British author is very certain that occupational deafness is well known, and that as our cities become noisier there will be more occupational deafness among printers, omnibus drivers, road breakers, and traffic policemen.

Aside from the effect which constant noise has upon many individuals and especially upon the hearing, the abatement of noise is imperative because it interferes with sleep. No argument is needed to establish the fact that every individual needs between six and nine hours of sleep. The vast majority are accustomed to sleep during the night, and for that reason at least the hours from eleven to seven should be, so far as possible, free from distressing noises. Growing children, many invalids, and all convalescent patients are in need of extreme quiet during the day. Add to this the fact that many night workers, such as nurses and printers, have to obtain sleep during the day, and we have another strong argument for the elimination of noise whenever possible. All street noises are indirectly harmful because to eliminate them windows have to be closed and thus both the sick

and the healthy breathe more vitiated air than they would if windows were kept open.

THE MEASUREMENT OF NOISE

At this point it may be of interest to review the procedures undertaken by the New York Commission for the Measuring of the Loudness and Intensity of Noise. Through the coöperation of private companies already well equipped with laboratories, apparatus and trained technical experts, the commission was able to undertake the first complete scientific survey and analysis of noise ever attempted. Arrangements were made whereby the Bell Telephone Laboratories furnished the necessary apparatus and the services of engineers to operate in the fields. The Johns-Manville Corporation furnished additional acoustic engineers. The noise measuring devices are of two types: one that measures the deafening effect of noise, and another, called a noise meter, that picks up the noise directly through a microphone and registers its intensity on a dial. The device to measure the deafening effect consists essentially of a record, similar to that used on a phonograph, carrying three bands or ranges of tones of known intensity. These are reproduced on a turntable with an electrical pick-up. The observer hears the sound through an offset receiver which permits the street and all other noises being measured, to be heard at the same time. The result is a test of the masking effect of the noise at any given spot, determined by the intensity necessary to make a tone of known intensity just audible above the noise being measured. The difference between the intensity of the test tone, and the intensity required for the tone to be heard in a quiet place, is a measure of the amount of noise present. This test, while in some respects not as accurate as the direct meter test, since it depends upon the reactions of the human ear rather than upon the precise responses of electrical measurement devices, is valuable in many ways. It serves as a check on direct measurement and as a guide for determining the loudness necessary for such warning signals as automobile horns and police whistles. The chief contributions of the traveling noise laboratory came from the direct measurement of noise present at various places in the city, certain more complicated analyses of this noise, and a determination of its sources. The unit of loudness used was the decibel. This has been described approximately as the smallest change which the ear can detect in the level of sound. More accurately, the unit may be defined as a ratio of intensities. Thus, if the intensity of two sounds are in a ratio of 10 to 1, they differ by ten decibels. If the intensities are in a ratio of 100 to 1, the sound differs by 20

decibels. In general, the number of decibels measuring the difference between two sounds is 10 times the common logarithm of the intensity ratio. Reducing this to a matter of common experience, it may be said that a normal conversation carried on at a distance of three feet, has a loudness of about 60 decibels. Since decibels do not measure absolute units of loudness, but a ratio of intensities, a small difference in the loudness as expressed in decibels means a tremendous difference in the intensities involved. Some idea of what this means may be gained from the following table in which the left hand column represents decibels above the threshold of hearing, and the right hand column the actual intensity above the threshold of hearing.

Decibels	Actual intensity
10.....	10
20.....	100
30.....	1,000
40.....	10,000
50.....	100,000
60.....	1,000,000
70.....	10,000,000
80.....	100,000,000
90.....	1,000,000,000
100.....	10,000,000,000

This table makes clear the difference between *loudness*, as measured by the ear (decibels), and *intensity*, as measured by electrical instruments. While loudness appears to the ear to increase by simple arithmetical progression, the intensity increases by logarithmic progression, leaping from ten to ten billion, while the loudness goes from ten to one hundred. I shall close this paper by quoting from two additional sources some further views on the subject of noise.

From the *Canadian Medical Association Journal* we take the following: "We may properly inquire how far noise is inimical to health. That it is, is tacitly admitted, when we put up signs on our streets '*Hospital Zone, Quiet Please.*' Incidentally it may be remarked in passing, that the modern hospital, with its steel and concrete construction, is not the quietest place in the world. It is really a vast resonance chamber. Metal doors groan and bang; footfalls and voices re-echo along the corridors; telephones are continually ringing and conversations can be heard through partition walls. Certainly noise interferes with sleep far more than we are apt to realize and lack of sleep is injurious. In this jazz age, with its high pressure performances both at work and at play, its scandalous hours and dietetic extravagances, there can be little doubt that the nervous system is being maltreated. Add to this the influence of continual noise, and in time 'frayed nerves'

will become general. It will be interesting to see what the effect of all this will be in the future on the production of psychoses and insanity."

Lastly, from the *International Medical Digest*, we quote: "Dennis informs us that some very interesting findings have been brought to light by workers who have been studying the effects of noise on human beings. It has been shown that the basal metabolic rate increased 19 per cent under conditions of noise, and that workers became more fatigued in a shorter time in a noisy room than in a quiet one.

"Dr. Foster Kennedy has been conducting experiments on persons having a deficiency in the bony covering of the brain. By means of a partly vacuumized drum placed over the skull, he has been able to measure impulses transmitted to a needle traveling over a smoke drum, and has found that the cerebral blood pressure is increased four times over normal by a sudden loud noise, and this increased pressure is apparent for an appreciable length of time after the occurrence of the noise. In fact, approximately thirty seconds are required for a return to normal.

"Landers has shown that the noise of a fire-cracker raised systolic blood pressure 20 mm. in twenty seconds, while Hyde and Sealapino report that the noise made by a telephone bell will accelerate the heart rate appreciably.

"A great many business organizations have shown rather conclusively that noise is costly, in addition to being harmful. For instance, a group of office workers engaged in a variety of machine operations, showed a 12 per cent increase in output when the noise level was decreased from 45 to 35 decibels. It has also been shown that the output of experienced typists was increased 4.3 per cent when the noise level of their workroom was reduced from 50 to 40 decibels. The typists slowed up in the noisy work room during the two-hour test periods, and had a tendency to gain speed in the same room 10 decibels quieter. A 42 per cent reduction in errors in a telephone operating room of a telegraphic company, and a 3 per cent reduction in the cost per message, followed lowering the noise levels from 50 to 35 decibels. Small wonder, then, that an increasing number of business men are taking Mr. Babson's advice to 'remove noise from the payroll'."

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RESULTS OF MONOCULAR OCCLUSION OF EACH EYE IN TESTING FOR HYPERPHORIA*

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Any question as to the value of monocular occlusion as a test for the phorias, particularly the hyperphorias, has, I think, been definitely settled. Following the writings of Marlow, O'Brien and many others, more and more ophthalmologists have come to use this test, until now it is recognized as a definite part of the refraction. Only those who are using this valuable test can know the pleasure to be derived from making comfortable some patient unsuccessfully refracted by other competent men who had ignored the possibility that the patient's discomfort might have been due to a phoria; or the satisfaction gained when one of our own unsatisfied patients returns and we make the test with resulting satisfaction to that patient and ourselves.

According to Marlow and O'Brien, the proper procedure in making the occlusion test has been first to find which eye was the non-fixing eye and to occlude that eye for a length of time varying from a few hours to one or two weeks. Marlow advised one week. O'Brien early advocated the short occlusion but more recently has swung to the longer periods.

Having determined the amount of phoria present, and I will discuss only the hyperphorias, we have wholly or partly corrected that phoria by adding prisms to the visual correction, the amount of prism added being dependent upon our judgment in each case.

Until two years ago I followed this plan quite closely with what seemed to me satisfactory results. There was always an occasional patient, however, who failed to gain comfort regardless of how long his eye was occluded or what part of the prism correction was tried. At that time I was puzzling over a patient whose *left* eye I had occluded with very unsatisfactory results. On the retest I occluded the *right* eye and as a result discovered a totally different prism weakness. The idea occurred to me that perhaps each eye had a balance of its own, although the coordinating action of the brain forces the two eyes to work together; much as each of two tennis balls might have if suspended in a framework by six rubber bands, but both forced to work together. In the above case occlusion of the *left* eye had shown two degrees of prism base up over that eye, or two degrees of right hyperphoria. But occlusion of the *right*, at the end of the fourth

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and seventh days, showed three degrees, also base up, over the right eye, or as we term it, three degrees of left hyperphoria. Therefore the left eye tended to turn down two degrees and the right eye three degrees. I ordered lenses having a one-degree prism base up in the right lens in place of the two-degree prism base up in the left lens, and this gave the patient complete comfort.

Since that time repeated use of the monocular occlusion test of each eye has shown some interesting results:

In the majority of cases the fixing eye is usually in a state of almost normal balance and if occluded will show little or no phoria, while the non-fixing eye shows either a hyperphoria or a cataphoria. This explains why, in the great majority of cases, the patient is comfortable following occlusion of the non-fixing eye only.

In a few cases both the fixing eye and the non-fixing eye tend to turn in the same direction but in different degrees, which led me to discard the terms right and left hyperphoria and substitute the terms hyperphoria and cataphoria of the occluded eye.

Rarely the phorias are in opposite directions, one eye tending to turn up and the other down, so that the total phoria is the sum of the phorias of the two eyes.

At the present time I record the presence of any manifest phoria but make no occlusion test unless cycloplegia shows very little visual error or previous glasses have failed to relieve symptoms. All patients are warned, however, that they may later have to wear a patch for a day or two.

If the patient's correction is slight or he remains uncomfortable, the non-fixing eye is occluded and the total prism correction found is placed in the lens for that eye. The prism is never split, regardless of strength, because it seems reasonable to assume that the placing of a partial prism correction over the fixing eye throws that eye out of its own normal balance by just that amount.

If symptoms still persist with this prism correction, and we have learned that they do in a small percentage of cases, the fixing eye is then occluded to the point of apparent complete relaxation. The total sum or difference of the prism weakness found in the two eyes is then determined and prescribed for and as stated elsewhere, this usually relieves symptoms where the single occlusion test has failed.

Whether or not the double test should be made as a part of every occlusion test is a question. As yet my series of cases is far too small for me to attempt an answer. I feel, however, that it is a test of great value in many cases and in time will

be used much more frequently than I am using it now.

The following three cases are reported to illustrate each of the three groups of hyperphoria combinations occurring when both eyes have been occluded.

Group I. Hyperphoria or cataphoria of the non-fixing eye with normal balance of the fixing eye.

Miss M, aged twenty-two, a nurse, was first seen in October, 1929. She complained of headaches and tiring of the eyes, especially when reading, for the past six months. Vision of the right eye was 6/20 -2; of the left, 6/20 +3. Refraction with 5 per cent homatropin showed:

Right, sphere -0.75 Cylinder -0.25 \times 15

Left, sphere -0.50 Cylinder -0.25 \times 180

A prescription was given. In January, 1930, she complained that her eyes still tired easily. Refraction with scopolamin, $\frac{1}{8}$ per cent, showed:

Right, sphere -0.75 Cylinder -0.50 \times 15

Left, sphere -0.50 Cylinder -0.50 \times 180

The increase in cylinder was ordered.

In February she still had much headache. A two-day occlusion of the non-fixing right eye showed a two-degree prism base down over the right eye which was incorporated in the right lens.

In April she continued to have much headache. A six-day occlusion of the non-fixing right eye showed four degrees base down over the right eye. A prescription was given for correction.

In January, 1931, her eyes were much better but she still had headache with long use. Occlusion of the *non-fixing* right eye on the fifth and eighth days showed $5\frac{1}{2}$ degrees base down over the right eye. Occlusion of the *fixing* left eye on the second day showed $2\frac{1}{2}$ degrees base up over the left but on the fourth and eighth days showed $\frac{1}{2}$ degree down over the left eye. Therefore the patient had a hyperphoria in the right eye of $5\frac{1}{2}$ degrees and a hyperphoria in the left of only $\frac{1}{2}$ degree, or almost normal balance in the fixing left eye.

A 5 degree prism base down in the right lens gave complete relief from headaches.

This patient did not need an occlusion test of the fixing eye. Belonging as she did to Group I the patient would have gained complete relief with the usual occlusion test had I taken the care to occlude her non-fixing eye for a long enough period in the first place.

Group II. Hyperphoria or cataphoria of unequal degree in the non-fixing and the fixing eye.

Mr. S, aged thirty-three, a mail clerk, was first

seen in January, 1931. He had been referred for cause of stomach trouble and nervousness. He read and drove with one eye closed and complained that objects jumped. He wore glasses which helped only slightly.

Refraction with scopolamin, $\frac{1}{5}$ per cent, showed:

Right, sphere +1.00 Cylinder +0.25 \times 105
Left, sphere +1.00 Cylinder +0.25 \times 75

Occlusion of the *non-fixing* right eye the first day showed 2 degrees down over right; the third day, 4 degrees down over right; the fifth day, 4 degrees down over right, and the seventh day, 4 degrees down over right.

Occlusion of the fixing left eye on the second day showed 0.5 degree down over left; the fourth day, 2 degrees down over left; the seventh day, 2 degrees down over left.

Therefore the *non-fixing* right eye showed 4 degrees of hyperphoria and the *fixing* left eye also showed a hyperphoria of 2 degrees which combined gave a total of only 2 degrees of hyperphoria, base down over the right eye. This correction was given, with complete relief of symptoms.

Group III. Hyperphoria of one eye and cataphoria of the other.

Mrs. C, aged thirty-two, a housewife, was first seen in January, 1929. She complained that her right eye was always sore and often red, and became worse when doing close work. The eye often twitched and she had much occipital headache. Vision of the right eye was 6/30; of the left, 6/75. Homatropin 5 per cent refraction showed:

Right, sphere +2.50 Cylinder +0.25 \times 120
Left, sphere +2.50 Cylinder +0.25 \times 90

There was manifest hyperphoria of 1 degree base down over the left eye and esophoria of 3 degrees for distance and 4 degrees for near. The visual correction was ordered but a muscle test was not advised for two months.

In April, 1929, she still had headache. Eight-hour occlusion of the *non-fixing* left eye showed a $3\frac{1}{2}$ degree prism base down over the left eye. This was incorporated in the left lens.

In June, 1929, she reported that she was better, but that after reading for an hour she would have to go to bed. Four-day occlusion of the *non-fixing* left eye showed 5 degrees of prism base down over the left eye. This was ordered, but the prism was split; 3 degrees down over the left and 2 degrees up over the right.

In August, 1929, she reported that her eyes were no better. A complete re-examination was

then started. Refraction with scopolamin $\frac{1}{5}$ per cent showed:

Right, sphere +2.50 Cylinder +0.50 \times 105
Left, sphere +2.50 Cylinder +0.25 \times 90

Occlusion test for four days over the *non-fixing* left eye showed 5 degrees down over the left eye. Seven-day occlusion over the left showed 6 degrees down over the left eye.

I was at that time just beginning to try the idea of occluding the fixing eye so I tried it on her. Three-day occlusion over the *fixing* right eye showed 3 degrees up over the right. Six days over the right eye showed 3 degrees up over the right.

Therefore the *non-fixing* left eye showed 6 degrees of prism base down over the left and the *fixing* right eye showed 3 degrees of prism base up over the right, or a total of 9 degrees in the two eyes. Therefore this case belonged in the small group in which there was a hyperphoria in one eye and a cataphoria in the other eye. The total 9 degrees of prism was ordered; 3 degrees up being placed in the right lens and 6 degrees down being placed in the left lens, just as found by the test. This gave her almost complete relief from symptoms unless she read too long, when she would get some headache.

SUMMARY

1. Monocular occlusion of the *non-fixing* eye alone to the point of complete relaxation is an exceedingly valuable test in the great majority of cases but in a few cases fails to bring out the true phoria present or to relieve symptoms.

2. Monocular occlusion of both eyes shows that each eye has its own state of muscle balance or imbalance, the amount of which can be determined by prolonged occlusion of each eye.

3. The relationship between the phorias present in the two eyes falls into three groups.

- (a) Those cases in which the *non-fixing* eye shows a hyperphoria or cataphoria and the *fixing* eye shows a normal state of balance.
- (b) Those cases in which both eyes show a hyperphoria or a cataphoria but of unequal degree.
- (c) Those cases in which one eye shows a hyperphoria and the other eye a cataphoria.

4. Monocular occlusion of both eyes is unnecessary in most cases but is of great value in those cases in which monocular occlusion of the *non-fixing* eye alone has failed to relieve symptoms.

Case Report

RUPTURED HEMORRHAGIC CYST SIMULATING A RUPTURED APPENDIX

FREDERICK W. NOBLE, M.D., Fort Madison

The following case of ruptured hemorrhagic cyst is reported because the symptoms of this condition are so nearly identical with those of a ruptured appendix as to demand close attention on the part of the diagnostician.

Miss R. A., a white school teacher, single, aged twenty years, entered the hospital January 11, 1932, complaining of sudden severe pain around the umbilicus at 4:00 the previous afternoon. Following the onset of pain she experienced relief and was able to sleep some that night. The pain recurred the following afternoon about 2:30 and she called a physician, who made a diagnosis of appendicitis and brought her to the hospital.

Past History. The patient had had scarlet fever at the age of eleven, followed by nephritis. She had also had measles, mumps and pertussis. She gave a history of sudden attacks of pain in the right lower quadrant, lasting for a day, on two previous occasions.

Physical examination showed a young, fleshy woman, who did not appear to be very sick, but complained of severe cramping pain around the umbilicus. Her pulse was 110, her temperature 99 and respirations 24. Her head, neck and chest were negative. Her abdomen was much distended and tender, and the muscles showed a board-like rigidity. Illoway's sign was absent. The urine was negative. She had a leukocytosis of 15,300.

We concurred in her physician's diagnosis of appendicitis, and thought that the appendix had ruptured.

The abdomen was opened by a low right rectus incision and on cutting the peritoneum, bright red blood oozed out. The appendix was sought and removed. It showed evidence of former disease, but no recent pathology. The pelvis was then investigated and clots were found in the left lower pelvis. These proved to have come from the left ovary, which had been the seat of a hemorrhagic cyst about the size of a billiard ball. This cyst had ruptured and had bled freely into the abdominal cavity. Left oöphorectomy was performed and the abdomen closed without drainage.

The patient's convalescence was uneventful and she left the hospital thirteen days after operation.

The operation was performed January 11, 1932,

and the following Saturday, January 16, I read an abstract in the *Journal of the American Medical Association* for that date, of a paper by Drs. Boggon and Wriggley, published in the London *Lancet*, reporting thirteen cases, all diagnosed as acute appendicitis.

Henry Illoway, a New York practitioner, some years ago described a sign of appendicitis which was due to disturbance of the inflamed appendix upon motion of the psoas muscle. He had the patient draw his knee to his chin, causing pain in the appendix region. He asked the patient to kick the examiner's hand, and this also caused pain in the appendix region. A sign closely resembling this is elicited by rotating the flexed thigh, especially with inward rotation, which will cause hypogastric pain. This latter sign will be particularly apparent when the ruptured appendix is adherent to the fascia covering the obturator internus and the subjacent fibres of the muscle are affected by the inflammatory edema.

MARION COUNTY PAUPER CONTRACT RENEWED

The contract between the Marion County Medical Society and the county supervisors was renewed for the tenth time at a recent meeting of the board of supervisors. The amount remains the same as in recent years, \$2,430.00. It is reported that during the preceding twelve months the members of the society had rendered services far beyond the current contract price, but that in view of the unusual economic conditions, the members consented to a continuance for another year at the same figure.

SOUTH DAKOTA ANNUAL MEDICAL MEETING

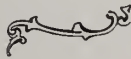
Dr. W. A. Bates, president, and Dr. J. F. D. Cook, secretary-treasurer, of the South Dakota State Medical Association, have invited the membership of the Iowa State Medical Society to participate in the Fifty-first Annual Session at Watertown, South Dakota, June 20, 21, 22, 1932.

PERSONNEL CHANGES ANNOUNCED BY PROFESSIONAL ASSOCIATES, INC.

Professional Associates, Inc., of Des Moines, announces the following changes in personnel: A new manager, Mr. G. A. Moseley of Des Moines, who has had twenty-eight years' experience in banking, investment and credit management, and in charge of credit and collections, Mr. Edgar J. Pearce of Des Moines, who has for the past few years been assistant credit manager of one of the larger Des Moines department stores.

The offices of Professional Associates, Inc., remain at 205 Equitable Building, Des Moines, Iowa.

STATE HEALTH COMMISSIONER'S PAGE



O. C. Stiles, M.D.



The Medical Profession and the County Health Unit

Today the people generally believe in health. They believe in the prevention of disease, in health promotion and in scientific medicine as applied to the prevention of disease.

With the knowledge that the application of modern public health methods can very greatly reduce the volume of sickness and the number of premature deaths, thereby preventing vast amounts of needless suffering and the expenditure of public funds for relief, it is only logical that the people demand greater facilities for the application of these methods.

Leadership in matters of health is traditionally the heritage of the medical profession, which has always stood as a bulwark between illness and death. It has resisted quackery that mankind might benefit. The role which the profession has played in the development of our present-day knowledge of public health is one of which it may well be proud. It is logical, then, that the people turn to the profession for guidance in public health affairs.

With the intricacies of modern civilization, the average private practitioner cannot hope to render service adequate to the needs of the public. Organized medicine alone cannot do it completely.

Only through the use by the physician of machinery provided for all, through a collective community channel, can the needs of the public in this regard be met.

The prevailing plan of part-time town and township health organizations in Iowa cannot possibly provide the facilities desired. A well rounded health unit, organized on a county-wide basis, is needed. Such an organization serves a population of sufficient size to make the provision of adequate equipment and trained personnel economically practical.

With a County Health Unit, as provided for in the statutes of Iowa, (Chapter 107-C1), the medical profession will have representation on the county board of health, thereby making it possible for the organized medical bodies to guide and control programs of public health work in the county. In addition, an adequate and economical service for all of the people in the community, in the way of basic sanitary provisions, personal hygiene, communicable disease control and health education, will be provided.

Thus not only will the people be served, but the medical profession will retain its heritage of leadership.

PREVALENCE OF DISEASE

	April, 1932	Mar. 1932	April, 1931	Most Cases Reported From
Diphtheria	31	50	26	Woodbury, Polk
Scarlet Fever	234	263	367	Polk, Woodbury, Wright
Typhoid Fever	8	7	1	Black Hawk, Cerro Gordo, Worth
Smallpox	176	100	314	Pottawattamie, Clinton
Measles	13	13	271	Black Hawk
Whooping Cough	105	102	91	Lee, Black Hawk
Chickenpox	143	127	334	Black Hawk, Woodbury
Poliomyelitis	2	2	1	Clay, Henry
Tuberculosis	63	36	28	Clinton, Black Hawk, Iowa
Syphilis	166	169	110	Polk, Black Hawk
Gonorrhea	187	219	99	Polk, Black Hawk

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THE 1932 ANNUAL SESSION

In addition to an unexpectedly large attendance, the Eighty-First Annual Session of the Iowa State Medical Society, held in Sioux City May 4, 5 and 6, was characterized by a strong scientific program, interesting scientific exhibits and a constructive business session. The registration showed that nearly one-fourth of the entire membership of the society attended the session and numerous welcome guests from adjoining states brought the total to some six hundred.

Seven prominent out of state guests made valuable contributions to the program and almost without exception, the papers read by members were of high quality and showed care in preparation and presentation. The morning clinics were continued again this year, and with marked success. The Friday morning program, devoted to pediatric subjects, was well received. The eye, ear, nose and throat section offered a good program and seems to have gained in attendance by being limited to a day and a half.

The entire lounge of the Masonic Temple, in which all meetings were held, was given over to a series of scientific exhibits, some of which illustrated scientific papers on the regular program, namely, the exhibit of Hal Downey, Ph.D., of the University of Minnesota Medical School, illustrating his paper on "Present Day Knowledge of Blood Cell Formation and Pathology;" the exhibit of James E. Dyson, M.D., of Des Moines, supplementing his paper, "Anemias in Children," and the exhibit of J. D. Boyd, M.D., and Charles L. Drain, D.D.S., of Iowa City, illustrating the former's paper on "Nutrition and Dental Caries." As in the past, the Iowa State Medical Library, the Iowa Tuberculosis Association and the Iowa State Department of Health had interesting exhibits. The latter presented a new departure in that the Bureau of Maternity and Infant Hygiene

and the Law Enforcement Division had separate exhibits. Newcomers in the scientific exhibit section were the Iowa State Department of Agriculture, the Iowa State College of Veterinary Medicine and Iowa Veterinary Medical Association, and the Iowa State Pharmaceutical Association. Finley Hospital, Dubuque, presented a large pathologic exhibit. Sunnycrest Sanatorium, of Dubuque, was also represented by an exhibit, and four departments of the State University College of Medicine were represented, as follows: The Department of Genito-urinary Surgery; the Department of Pathology, the Department of Preventive Medicine, and the Department of Roentgenology.

The condition of the society as reflected by the sessions and activities of the House of Delegates would indicate an harmonious and progressive prevailing spirit. The first session, on Tuesday, May 3, produced a vigorous discussion of various state society policies, which resulted in approval of the amendments to the Perkins, Haskell-Klaus law as proposed by the Legislative Committee and the voting of authority to that committee to proceed in other legislative matters according to its best judgment.

A proposed change in the constitution which would consolidate the powers of the Council and the Board of Trustees in the former body was presented and will be voted upon at the 1933 session.

At the Friday morning meeting of the House of Delegates, by unanimous vote the dues for 1933 were fixed at \$10.00 and the election of officers resulted in C. B. Taylor, of Ottumwa, being chosen president-elect and W. W. Bowen, of Fort Dodge, being elected to the first vice presidency. Following the death of President Bert L. Eiker, Dr. Bowen has since succeeded to the presidency.

The annual banquet, held in the Martin Hotel, was well attended and President Channing G. Smith gave his presidential address, following which Trustee E. M. Myers read the address of the President-elect, as Dr. Eiker was at that time critically ill in a local hospital. This and the sad necessity of presenting the president's gavel to Dr. Eiker upon his deathbed cast a shadow over the Eighty-First Annual Session, which was otherwise one of the outstanding meetings of the Society.

UNEMPLOYMENT AND TUBERCULOSIS

Prior to the discovery of the tubercle bacillus by Koch some fifty years ago, tuberculosis was truly the "Captain of the Men of Death." This epical discovery not only demonstrated the etiologic agent of this universal scourge but offered a foundation for the study of the modes of its transmission and the methods effective for its control. The most

important single effect of this work, according to Osler, has been to stimulate a world wide crusade against tuberculosis as a preventable disease, which in the past twenty-five years has played a most important part in removing this disease from its time honored position of first among the many causes of death. While doubt has been expressed by many eminent authorities that this preventive campaign is a sole factor, or even perhaps the most prominent one in achieving these present results, none doubt that such an intensive campaign has wielded a far-reaching effect and has definitely influenced the environmental factors which play so important a part in this disease. One must appreciate that this campaign was seriously handicapped at first since it was started without specific means of prevention, without a definite method of cure and with no guide posts in comparable fields of social endeavor. Its first objective was the isolation of infectious cases in hospitals. Soon, the campaign against tuberculosis was broadened to include better standards of individual health for the whole population, more sanitary conditions in the home and in the workshop, improved nutrition, particularly in childhood, and the eradication of the debilitating diseases which predispose to tuberculosis.

At the end of twenty-five years, we find tuberculosis dislodged from first to seventh place as a cause of death, and its rate cut from two hundred to less than sixty per one hundred thousand of population. While it is not possible to point out any single arresting factor which has been positively identified as responsible for this great achievement, from the many causes, we can report a result which, in terms of lives saved, illnesses prevented, families kept together and homes maintained, is without parallel in the whole field of public health and social betterment.

Realizing, however, that this disease is prone to follow debilitating conditions, we wonder and look with apprehension upon what may happen following this period of national depression. This point has been vividly stressed in a recent paper by Walter W. Lee.* He shows that the mortality rates in the United States rose slightly but significantly during the World War period and fell rapidly after the armistice to a rate about 20 per cent below the pre-war period. On the other hand, the German rates in 1918 exceeded those of the United States by 55 per cent. Following the war the rates dropped rapidly until 1921, to rise again during the financial crisis of 1922-1923 to a rate 62 per cent greater than that of the United States in 1923. Following 1923 the German rates

fell to the pre-war trend by 1927. Lee finds that the peak in the German data in 1918 corresponds to the industrial activity and financial depression of the period. The peak of 1923 corresponds to the financial depression accompanying the inflation of the German mark. The fall in the rates following 1923 coincides with the financial recovery in Germany.

The immediate results of unemployment of large masses of people, especially among the needy and absolutely poor who are dependent upon their daily earnings, manifest themselves in undernourishment, insufficient clothing, improper food, overcrowding and, in many instances, insufficient sanitation. A less tangible factor is that of mental anxiety, which is recognized by the best of authorities as a predisposing factor to infectious diseases. While it is true that our mortality statistics do not show any perceptible change in rate for the present period of depression, such a change is as yet hardly to be expected, since we know that tuberculosis may become manifest only months or years after the susceptible individual has contracted an infection.

In certain localities, notably our large cities, statistics are already beginning to show a trend in an upward direction. It is reported by the New York Tuberculosis and Health Association that, during the past six months, there has been an increase of fourteen per cent in the number of individuals who have applied for treatment in the tuberculosis clinic and that, on October 1, 1931, there was a waiting list at the Mission Bureau hospital of five hundred and three suitable and acceptable cases for institutional care which could not be admitted because of a dearth of hospital beds.

In Iowa, the vital statistics have not yet reflected an increase in this disease, and it is less likely that this increase will be manifest in anything like the degree that has been noted in the larger centers of population. It does not seem logical, however, to assume that there will be no increase in tuberculosis in Iowa as a result of the present depression, and it would be a sad mistake to in any way handicap or imperil the many agencies operating in defense against this disease. It would seem entirely fitting that, with this prospect before us, physicians generally should be even more alert for the early signs or symptoms of tuberculosis, and that where these signs or symptoms are detected, prompt steps should be taken to secure proper treatment of the individual and proper preventive measures established for the protection of all contacts. The joint efforts of the medical profession and the various established health agencies have, in the past, accomplished a great work and, because a depression has influ-

*Amer. Rev. Tuberc., 24, 326, 1931.

enced the economic trend of the times, the battle to maintain the ground won must be pursued with even greater diligence than in the past.

THE HEALING CULT*

In every state of the Union there is at the present time legislation designed to protect the public from unqualified practitioners of the healing art. That this legislation has failed at least in part in the accomplishment of this purpose is indicated by a recent report of the Committee on the Cost of Medical Care, entitled, "The Healing Cult." This report would indicate that approximately \$125,000,000 is spent annually in the United States for the services of practitioners other than those having the title of doctor of medicine. These cults include osteopaths, chiropractors, napropaths, natureopaths and allied healers, Christian Science and New Thought practitioners. It is pointed out that this sum represents 12 per cent of the amount spent on regular practitioners of medicine. It is estimated that the people of the United States annually spend \$42,000,000 for the service of the nation's 7,650 osteopaths, \$63,000,000 on the 16,000 chiropractors and \$10,000,000 on the 2,500 natureopaths and allied groups and another \$10,000,000 on the 10,000 Christian Science and New Thought healers.

A study of 7,800 representative families reveals that only 52 families consider healers in these cults as their family practitioner. Only 1.3 per cent of the families having sickness during the year used them exclusively, although 10 per cent resorted to healing cult practitioners at one time or another.

The report traces the development and history of the various cults and gives a limited description of the schools, ideas and legal status of each group. It points out the similarity in the origin of many of the cults, in that originally their treatments were cure-alls based on all inclusive theories of the cause of disease. Modification of such theories and the elevation of professional and educational standards gradually led many of the cults to improve in training and diminish in number and some eventually to be assimilated into the general body of regular medical practitioners. Their inspection of the quality of teaching in chiropractic and natureopathic schools indicated that the training was far below that standard legally required of medical practitioners. It was found that the entrance requirements are lax, equipment is poor and

none make adequate hospital clinical facilities available to its students, while faculties are largely composed of persons ignorant of the established facts of medicine. After completion of the regular course in one of these schools, the report reveals the student receives four diplomas and becomes a doctor of chiropractic, a doctor of natureopathy, a doctor of physiotherapy, and a master of physical culture.

On many occasions during the past few years, official and semi-official bodies have called attention to the low scholastic standing of many of these schools and it is surprising in view of this widely disseminated information that certain of these cults continue to enjoy so large a patronage. One should consider, however, that the public, while partially informed and partially intelligent, is neither completely informed nor altogether intelligent upon this subject of medical care, and many people are still basically superstitious about disease and health. They know little about the body and its functioning. They regard medicine neither as a science nor an art, but as magic. To these, the healing cult practitioner with his simple explanation of disease, his confidence and his promise of cure appears as a great magician, greater by far than the physician who, knowing his limitations, hesitates to promise a cure.

A second class of patients who have visited regular doctors and who have been told that their condition is incurable, seek aid from the irregular practitioner on the basis that little can be lost in trying. This same class fills the coffers of the patent medicine vendor, and is perhaps the most pitiful of all groups, since these patients condemned to die from their ailments are willing to pin their faith and spend their money on any remedy which may even remotely offer promise of relief. From the standpoint of the irregular practitioner, the idea of healing the sick and being a doctor with all that the title entails is very attractive indeed. In many instances, however, such an individual finds the field of medicine healing closed to him by reason of the very high qualifications which the law requires of medical practitioners. Healing cults, therefore, provide a shortcut for those who lack time, money or mental capacity to attain the qualifications demanded of the medical profession.

In Iowa the enactment of a law by our last legislature requiring that practitioners of any healing art or those who pose as doctors display the degrees of their title following their name will go far in preventing the cult practitioner from posing as a medical physician, although it is evident that many patients are unaware of the limitations of these healing cults and do not understand the

*Editor's Note—The Healing Cult, published by the University of Chicago Press, is the sixteenth study completed by the Committee on the Cost of Medical Care and is based on an exhaustive five-year study of the problem of "the delivery of adequate scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life."

meaning of the titles "D.O., D.C., M.D., etc." The reputation of the healing cult practitioner is sustained by the fact that in acute diseases 80 to 90 per cent of all patients get well under any treatment or none. When a patient so recovers, the attending practitioner is usually quite willing to accept the credit for the cure and where recovery does not take place, a ready explanation for the failure is usually forthcoming. We appreciate the fact that deceptions of this sort are not limited to the practitioners of the healing cults. In fact, we are all familiar with physicians who are equally ready to accept full praise for all recoveries, but this is another story and a fit theme for a full length editorial.

Knowing, however, the vastness and seriousness of this problem, it behooves us to cast about for ways and means by which these conditions can be improved. Louis S. Reed, author of "The Healing Cult," offers the following suggestions:

"The lay community stock of knowledge regarding the human body and its functioning must be enlarged and more widely disseminated. As a result, for each succeeding generation, the limit within which credulity exists and unscientific practitioners can operate, will be narrowed. The passage by more states of basic science laws may be expected to cut down the inflow of poorly trained practitioners. These laws already in existence in some states require that all applicants for licenses to practice any branch of the healing art must first pass an examination in the basic sciences. The state should see that healing practitioners, whatsoever their belief, are properly trained and that they possess an adequate knowledge of the human body and its functioning, and the diseases which afflict it. The use of any therapeutic measures by untrained or poorly trained individuals, unable to diagnose disease and unaware of their limitations, is unsound, dangerous and wasteful and should be prohibited by proper legislation. While religious healing is able to accomplish beneficial results in some conditions, it may be harmful when practiced by those unable to diagnose disease, especially when it is held that disease is an illusion."

MAGGOTS IN THE TREATMENT OF OSTEOMYELITIS

The treatment of acute and chronic osteomyelitis by the introduction of fly larvae is comparatively new—so new, in fact, that it has not yet appeared in many of the newer text books on surgical treatment.

When first introduced it was supposed that maggots were effective in the treatment of osteomyelitis because of their mechanical action.

They were supposed to digest and destroy bacteria and necrotic material, thus rendering such matters inert; and further, by their rapid motion and activity, stimulate a rapid outpouring of blood serum which is in itself healing. A little later it was noticed that the pH of the blood serum in the wound was increased. Still further observations indicated that the maggots which were introduced into the wound would live only a short time and, if new crops were introduced successively, after about the fifth introduction no maggots would live. It is now supposed that death occurs because the pH of the wound has increased and because some substance has been produced through the contact of the live maggots with the tissues which so increases in virulence that with time the maggots are killed by its potency. For want of a better name the authors have called this substance a "therapeutic active principle."

Animal experiments have shown that this additional "agent" which was developed through the contact of the maggots with living tissue was in itself a curative substance. That an additional agent was probable in effecting a cure seemed clearly demonstrated by the use of filtered extracts from the bodies of crushed larvae. In a recent report by Livingston and French¹ they advanced the opinion that the active principle is contained within the body of the larvae, and in support of this theory advanced the observation that filtered, uncontaminated products derived from the bodies of larvae in cultures, when brought into contact with pyogenic organisms, destroyed the cultures. The active principle was obtained by grinding live maggots in sterile saline solutions and filtering the product through coarse and fine Berkefeld filters. Due care was taken to insure sterility and the standardization of the products for potency was made by standard methods. Recently solid substances have been obtained from such filtrates, which to date are of unknown composition. Chemical analysis and animal experimentation are now being attempted to prove the nature of these healing substances. The vaccine used by these authors was an autogenous or polyvalent suspension of killed organisms counted and fortified by the active principle and tested for sterility. They observed that a vaccine of killed organisms in saline solution without active principle fortification did not prove sufficient.

The work of these authors, as well as the supporting evidence obtained by many other authors, would indicate that this form of treatment is a decided advance in the handling of these obstinate cases. In all of the larger medical centers and in many of the smaller ones this treatment is now being employed, and adequate material for prop-

erly controlling the treatments have been inaugurated. Recently Livingston and French¹ have reported one hundred cases of chronic osteomyelitis, infected wounds, and compound fractures treated by the active principle and vaccine with or without the use of live maggots. They report that 88 per cent of their cases have been satisfactorily healed. Chronic leg ulcers, sinus infections, and mastoid infections are now being treated by this active principle and vaccine. Results as yet cannot be stated. Three cases of long standing middle ear disease have been healed.

Wilson, Doan and Miller² have reported twenty-six consecutive cases of acute or chronic osteomyelitis which have been treated with the fly larvae during the past eighteen months, with a complete cure in twenty-two cases. The average healing time, according to these authors, for all cases was ten weeks. For those lesions occurring in children the period was seven weeks. They point out that the type of scar remaining is a distinct improvement in that there is an obliteration of the cavity occasioned by operation and the diseased process through the ingrowth of healthy granulation tissues with at least partial restoration of the blood supply. These authors emphasize the fact that the best surgical judgment must always be exercised in the individual case and precede the treatment with fly larvae if satisfactory results are to be obtained.

1. J. A. M. A., April 2, 1932.

2. J. A. M. A., April 2, 1932.

NURSING PROFESSION OVERCROWDED

Training schools must curtail the steady production of more nurses or the morale of the nursing profession will break down completely. This is the opinion of the Committee on the Grading of Nursing Schools, following an analysis of early returns of the 1930 census on workers.

How serious the oversupply of graduate nurses has become is revealed by the Grading Committee after tabulating figures for eighteen states and the District of Columbia. For this group, since the 1920 census, the total population has increased 7 per cent, while the total number of trained nurses has increased 78 per cent.

Although there are still areas of the country and groups of patients not properly nursed, owing to poor distribution and lack of special training, the figures for the forty-two cities studied show that the average nurse has no more than 149 days of employment in any given year, according to the present sickness rate. In Bangor, Maine, she has not more than 77 days of work, and in Ottumwa, Iowa, where employment conditions are best among the cities studied, she can work not more

than 201 days in the year. Rates for the other cities range between these two.

States as a whole are somewhat less oversupplied with nurses, although in New Hampshire the nurse can expect no more than 190 days of work in the year, and in Maine, Vermont, Iowa, North Dakota, South Dakota, Kansas, Delaware, Montana, Wyoming, Arizona, Nevada, Idaho and the District of Columbia there is not nearly enough nursing to be divided between the trained and untrained nurses competing for patients.

Untrained nurses are not on the increase, census figures show, but trained nurses are being turned out to terrific competition by the thousands each year. In Maine, for example, there was in 1900 one trained nurse for every 5,068 persons; in 1910, there was one for every 910; in 1920, one for every 579, and in 1930 one for every 349.

According to Dr. May Ayres Burgess, who presented these figures in the March number of the *American Journal of Nursing*, "if nursing is to avoid disaster, the steady production of more students, who become graduates, must cease. It must cease not only in the small schools, but in most of the large schools as well. Graduate nurses must be employed. If they are unemployable, they must be reëducated. The schools of nursing have produced them. They are members of the profession. Unless their morale is to break down completely, they must either be eliminated or utilized.

"This is a year of national economic distress. Hospitals are short of funds. How, then, can hospitals take care of their patients with reduced numbers of student nurses, with increased numbers of graduate nurses, and without increasing the annual budget? Let us not assume that there is no solution for this problem. Nurses who are intimately familiar with hospital administration may be able to discover new economies, new methods of organization, which will make reductions in the number of student nurses possible. Unless some solution can be found, which it is within the practical means of the hospital to adopt, the nursing profession will continue to grow in numbers and in distress."

TESTIMONIAL DINNER FOR DOCTOR ROBERT EVANS

As a fitting climax to a long and honorable career, the Webster County Medical Society met at a testimonial dinner on April 28th honoring Dr. Robert Evans, who for forty years has been active in medical practice and medical leadership in Fort Dodge and who, on this forty-fifth anniversary of his graduation in medicine, has elected to retire from active professional service.

Seventy-five members of his profession gathered from all over the state, were present and the entire program of the evening was planned to show with what respect, admiration and friendship they regarded him, and with what regret they saw him leave their ranks.

Dr. Sumner B. Chase presided as toastmaster of the informal program which followed the dinner. He called first on Dr. W. W. Bowen, incoming president of the Iowa State Medical Society, with whom Dr. Evans has been associated in practice for many years. Dr. Bowen spoke briefly, but with sincere feeling, of his partner's decision to retire and of their many years of practice together. He told a few outstanding incidents of their association, recalling to many other physicians present some of the experiences of their earlier lives.

Enthusiastic testimony was given by the following physicians of the sincerity and efficiency of Dr. Evans during his long service to his community, and his ever faithful fraternity with his colleagues: Drs. P. B. McLaughlin, of Sioux City; M. J. Kenefick, of Algona; Prince E. Sawyer and William Jepson, of Sioux City; Channing G. Smith, of Granger, retiring president of the Iowa State Medical Society; E. L. Rohlf, of Waterloo, and Howard D. Gray, of Des Moines.

CHILD DEVELOPMENT AND PARENT EDUCATION CONFERENCE

The sixth annual Iowa State Conference on Child Development and Parent Education will convene at Iowa City, Iowa, June 21, 22 and 23, 1932, under the auspices of the Iowa State Council for Child Study and Parent Education. The Iowa Child Welfare Research Station, the Extension Divisions of Iowa State College and the State University of Iowa, and the Iowa State Teachers College will coöperate in the meetings. No admission fee will be charged for any of the conference sessions.

The program follows:

Lectures

Professional Problems in Parent Education, Mr. Ralph P. Bridgman.

Feeding the Family During Depression, Miss Genevieve Fisher.

The Effect Upon the Child of Changes in Economic Organization, Dr. Karl E. Leib.

Child Health and Protection in the State of Iowa, Dr. Fred Moore.

Mental Hygiene in the Community and State; Mental Hygiene and the Individual Child. Dr. George K. Pratt.

Growing Up With Your Children; Your Child in a Changing World, Mr. Karl de Schweinitz.

What the Community Does to the Child; A Sociologist Looks to the Future, Dr. Clifford R. Shaw.

The Visiting Teacher, Miss Wilma Walker.

Round Table Discussions

Professional Problems in Parent Education, Mr. Ralph P. Bridgman.

Minimal Diet Essentials, Miss Genevieve Fisher.

Mental Hygiene, Dr. George K. Pratt.

Sex Education, Mr. Karl de Schweinitz.

The Community and the Child, Dr. Clifford R. Shaw.

The Visiting Teacher, Miss Wilma Walker.

MEDICAL PROFESSION AND PREDATORY INTERESTS*

Our rapidly changing social order calls for a readjustment in organized medicine. This necessary readjustment should be initiated and controlled from within the profession rather than be forced from without.

The battle is no longer one merely of healing and prevention against the controlling interests of sociologists, economists, industrialists, and insurance magnates, combined in a mighty merger for the manipulation and control of medical service.

In this gigantic test of strength, medical statesmen are needed as leaders. They should be equipped with a wide experience and have access to information upon widely diversified subjects.

Public health officers are in a position to be of great assistance in the contest. These two groups, organized medicine and public health, must not fail to realize that they will stand or fall together.

IOWA MEDICAL DIRECTORS MEET

The Eighteenth Annual Meeting of the Iowa Medical Directors Association was held at the Des Moines Club in Des Moines, May 26. The association is composed of the medical directors of all old line life insurance companies in Iowa. Each year an authority on some branch of medicine related to insurance medicine is brought to the annual meeting. This year Edward J. Stiegletz, M.D., of Chicago, assistant professor of internal medicine at Rush Medical College, addressed the association on the subject of Prognosis in Hypertension. Forty members and guests attended the meeting. L. K. Meredith, M.D., medical director of the National Life Company, was elected president for the ensuing year; George E. Decker, M.D., president and medical director of the Register Life Company of Davenport, was elected vice president; and Ralph R. Simmons, M.D., assistant medical director of the Equitable Life of Iowa, was re-elected secretary-treasurer of the association.

*Editor's Note—This article, prepared by J. N. Baker, M. D., Health Officer, Department of Public Health, State of Alabama, is quoted from the United States Daily, May 23, 1932.

Official Announcement

William W. Bowen Becomes President

It becomes the solemn duty of the secretary to declare that by the untimely death of Bert L. Eiker, within twelve hours after becoming president, William W. Bowen, vice president, was elevated to the presidency of the Iowa State Medical Society, by virtue of Section 2, Chapter VI of the by-laws, which provides that "in the case of death . . . of the President the vacancy shall be filled by the Senior Vice President, beginning with the first. They shall perform all other duties prescribed for that office." This official pronouncement would be incomplete without the formal mention of two noteworthy facts connected with the sad and dramatic incidents of the 1932 annual session to the members of the Iowa State Medical Society who had elected to honor Dr. Eiker's lifetime of professional accomplishments and years of unselfish service to organized medicine by making him President of the Society.

It is a cause for deep satisfaction that Dr. Eiker should have been presented with the gavel and formally declared president at a time when he was fully conscious to receive and accept the honor that was thus conferred upon him. The retiring president, accompanied by the proper officers of the Society, waited upon Dr. Eiker at the hospital some twelve hours before his death and presented the gavel to Dr. Eiker, who briefly but beautifully expressed his happiness and appreciation and the hope that regardless of what might happen, the Iowa State Medical Society would progress vigorously and harmoniously.

The entire membership of the Society should also recognize that Dr. Eiker's condition from the beginning of his illness was so critical that both the nominating committee and the House of Delegates fully realized that in all probability the selection of first vice president was in fact the election of the president for the ensuing year. The secretary appeared before the nominating committee and pointed out this fact, so that its action and the subsequent action of the House of Delegates in the choice of first vice president were taken with the full realization of their importance. We should therefore pledge ourselves to carrying out the ideals of Dr. Eiker under the guidance of his successor, Dr. Bowen, our deliberately chosen leader.

The parting message which Dr. Eiker gave to his professional comrades, carefully prepared for his address as president elect, which was read for him the night of the annual banquet, made so strong an appeal for unity and progress that it may well inspire us to work for these ideals through loyal cooperation with President Bowen in all of the undertakings of the year. Dr. Eiker's address concluded with these words: "If we march forward (and that is the only direction that ever has offered any hope to mankind), march forward with every man in perfect step, with every voice in unison, with every eye fixed upon the light of truth which illuminates the pathway to justice, with our membership administering to the mental and physical ills of mankind, with words of hope that hold faltering humanity in line until the temporary clouds shall lift; if we can do these things (and we can do them) then we have again established the fact that our profession can meet the emergencies of civilization as no other profession ever has done, and through the light of science carry hope and freedom to impoverished bodies and misguided souls. This will lead us to individual effort and individual duty; lead us to the point where each one must rule over himself as a just king rules over his subjects; this accomplished, organized medicine will have no bounds and will shine forever in the glory of greatness."



Secretary.

The President's Message



WILLIAM W. BOWEN, M.D.

When the gavel of The Iowa State Medical Society fell from the lifeless grasp of President Eiker after his brief tenure of office of only twelve hours, there was but one emotion throughout the profession of the state—grief; and when a few days later at his home in Leon a multitude of his townsmen, relatives, friends and patients gathered about his flower-decked bier to pay the last token of respect, it was fitting that from every part of the state, far and near, well nigh four score physicians representing the leaders from every locality should gather with bowed heads to do him honor and to express the sorrow of the profession at his untimely death.

His mantle has unexpectedly fallen upon my untrained shoulders. I ask the forbearance and the assistance of the profession to carry on the unfinished work that he would have done so well so that it will be a credit to the Society and the state.

W. W. Bowen

President

SPEAKERS BUREAU ACTIVITIES

IN APPRECIATION

The death of Doctor Bert L. Eiker indeed took a leader from the medical profession—not only as the head of the State Medical Society but as a leader of the medical profession among the laity. He had the rare ability of presenting the facts of preventive medicine to lay audiences in a simple, clear and interesting manner and was in great demand as a speaker on health subjects to the various lay organizations throughout the state. The Speakers Bureau wishes to pay tribute to his many services in their behalf by quoting from expressions of appreciation of the messages he delivered.

"Doctor B. L. Eiker, of Leon, addressed the Allerton Lions Club last evening on the subject, 'Our Inheritance.' He gave an excellent address and it was received with considerable enthusiasm. Dr. Eiker is certainly a credit to the Speakers Bureau and we truly appreciate the privilege of hearing him. Thank you."—J. Harvey McCall, M.D., Allerton.

"Yesterday evening at our Rotary meeting, we were privileged to have Dr. B. L. Eiker, of Leon, Iowa, as our speaker, whom you sent to us through the courtesy of the Iowa State Medical Association. As secretary of the Winterset Rotary Club, I have been asked by our members to write you thanking you for your cooperation and your kindness in sending such a wonderful talker and supreme program to our meeting. Dr. Eiker delivered a very fine address which I may assure you will be long remembered by all of the members of our Rotary Club. Different men have made many complimentary remarks about our evening's entertainment, one member of our organization stated that it was the finest talk that he had ever heard delivered by anyone. I heard another member say that he had never enjoyed a talk more and that if ever he thought deeply, Dr. Eiker's address made him do it. These are just a few of the many remarks heard from our members and I pass them on to you to let you know how very much we appreciated your help and assistance."—Charles D. Van Werden, Attorney, Winterset.

UPPER DES MOINES MEDICAL SOCIETY

The meeting at the Iowa Great Lakes on Tuesday, June 21, will be a combination of the annual meeting of the Upper Des Moines Medical Society and the last of the ten meetings of the postgraduate course which the Speakers Bureau arranged for the members of this society. Fifty physicians in the northwestern part of the state are enrolled in this course and are unanimously enthusiastic in their praise of the interest and value of the work. The work is a symposium on the diseases of metabolism and endocrinology and include a discussion of the following subjects:

April 12—Emmetsburg

Anatomy and Physiology of the Endocrines—O. M. Cope, M.D., University of Nebraska.

April 19—Emmetsburg

Female Gonads—Joseph Brown, M.D., Des Moines.

Male Gonads—J. C. Hill, M.D., Newton.

May 10—Emmetsburg

Hereditry and Disease—W. W. Bowen, M.D., Fort Dodge.

Obesity—A. A. Schultz, M.D., Fort Dodge.

May 17—Emmetsburg

Diseases of the Pituitary and the Parathyroid—J. D. Boyd, M.D., University of Iowa.

Diseases of the Spleen—F. R. Peterson, M.D., University of Iowa.

May 24—Spencer

Diabetes Mellitus—E. B. Winnett, M.D., Des Moines.

Vitamins—Dennis Kelly, M.D., Des Moines.

May 31—Spencer

Physiology and Histopathology of the Blood—R. N. Larimer, M.D., Sioux City.

Laboratory Blood Technic—A. C. Starry, M.D., Sioux City.

June 7—Spencer

Leukemias—C. W. Baldrige, M.D., University of Chicago, Chicago.

Pernicious Anemias—W. L. Bierring, M.D., Des Moines.

June 14—Spencer

Allergy—W. Ray Shannon, M.D., University of Minnesota.

Allergy—W. P. Larson, M.D., University of Minnesota.

June 21—Iowa Great Lakes

Arthritis—Martin I. Olson, M.D., Des Moines.

Arthritis—W. E. Wolcott, M.D., Des Moines.

RADIO BROADCASTING

With the end of May the Speakers Bureau completed its sixth month of radio broadcasting. The response has been so gratifying that plans are made for their continuance through the courtesy of the two radio stations, WO1 at Ames, and WSU1 at Iowa City.

The schedule of talks which are now being given is:

May 19—Insurance that Actually Insures—M. E. Barnes, M.D.

June 2-3—Milk Borne Diseases—H. A. Lanpher, M.D.

June 9-10—Summer Complaints in Children—Martin D. Ott, M.D.

June 16-17—Typhoid Fever—Carl F. Jordan, M.D.

June 23-24—Appendicitis—O. J. Fay, M.D.

June 30-July 1—A Safe and Sane Fourth—Donald Conzett, M.D.

July 7-8—Vacations and Health—Erwin Schenk, M.D.

July 14-15—Recreation—E. C. Junger, M.D.

Attention is called to the change in time of the weekly broadcast over WO1. The talks from this station will now be heard on Fridays at 4:00 p. m. The time at WSU1 remains the same—Thursdays at 8:00 p. m.

SOCIETY PROCEEDINGS

Bremer County

A joint meeting of the Bremer County Medical Society and the staff of St. Joseph's Mercy Hospital of Waverly was held at Readlyn, Iowa, the evening of April 28. Papers on insanity from the clinical and chemical standpoint of certain aspects were presented by F. R. Sparks, M.D., of Waverly, and Professor A. W. Swensen of Wartburg College.

James E. Whitmire, M.D., Secretary.

Cass County

Thursday, April 28, a dinner meeting of the Cass County Medical Society was held in Atlantic with fourteen members and guests present, and the following papers presented: Simple Mastoiditis, E. C. Montgomery, M.D., of Atlantic; and Physicians or Fossils?, R. M. Sorenson, M.D., of Cumberland. Another meeting of the society was held in Atlantic, Tuesday, May 10. After a six-thirty dinner, the scientific program was presented as follows: Raynaud's Disease, R. L. Barnett, M.D., of Atlantic, and Thrombo-angiitis Obliterans, H. A. Johnson, M.D., also of Atlantic. Both papers were very well received and the paper by Dr. Barnett was made doubly interesting by the presentation of a case of Raynaud's disease in connection with it. The report of the delegate from Cass county to the annual meeting of the Iowa State Medical Society was read and a vote of thanks was accorded him. The next meeting of the Cass County Medical Society will be held in Griswold, June 14.

R. M. Sorenson, M.D., Secretary.

Cerro Gordo County

The Cerro Gordo County Medical Society was entertained by the Park Hospital Clinic, Tuesday evening, May 17, at a six-thirty dinner at the Eadmar Hotel. After the dinner, members of the clinic presented the following cases: Cholecystectomy and Mastoidectomy in a case of severe diabetes, G. M. Crabb, M.D.; Pseudo-hypertrophic muscular dystrophy, G. E. Harrison, M.D.; Arteriosclerotic heart disease, L. R. Woodward, M.D., and Exophthalmic goiter, T. E. Davidson, M.D. The society was fortunate in having present at the meeting Harold C. Habein, M.D., of the Mayo Clinic, who discussed all of the above cases.

T. E. Davidson, M.D., Secretary.

Clinton County

F. R. Peterson, M.D., of Iowa City, was the speaker of the evening at the Clinton County Medical Society meeting held in Clinton, Tuesday, May 10, taking for his subject, Management of Skull Fractures. A motion picture film on spinal anesthesia was shown, and a brief business session closed the meeting.

Fayette County

Tuesday, May 10, the Fayette County Medical Society met at Fayette, and A. F. Fritchen, M.D., of Decorah, read a paper on the Future Care of Our Soldiers. A symposium on Neurosyphilis was presented, with Robert A. Stewart, M.D., of Independence, speaking on the Types of Neurosyphilis, and George Boody, M.D., also of Independence, addressing the group on Treatment.

C. C. Hall, M.D., Maynard.

Greene County

Meningitis was the subject of the scientific program when the Greene County Medical Society met in Jefferson, Thursday, April 28, with Ben C. Hamilton, Jr., M.D., reporting on three cases of that disease, and John R. Black, M.D., reading a paper on Diagnosis of Meningitis.

Hancock-Winnebago Society

The Hancock-Winnebago County Medical Society held its regular meeting in Forest City, Friday, April 29, at the Hawks Hotel. Following the six-thirty dinner, the evening was spent discussing important business questions, among which was the postgraduate program of the Speakers Bureau of the Iowa State Medical Society. This program was approved and a motion was passed favoring a course to be held at Mason City this fall.

W. F. Missman, M.D., Secretary.

Ida County Heart and Lung Clinic

The Ida County Heart and Lung Clinic held in the Ida Grove Hospital, Thursday, May 19, under the auspices of the Iowa Tuberculosis Association and the Ida County Medical Society, was quite successful. John H. Peck, M.D., of Des Moines, conducted the lung section of the clinic, examining about fifteen patients, while H. M. Korn, M.D., of the State University of Iowa College of Medicine conducted the heart section and examined thirteen patients. A six-thirty dinner was served, after which Dr. Peck addressed the group on Early Diagnosis, Differential Diagnosis and Treatment of Pulmonary Tuberculosis in the Child and Adult, illustrating his address with lantern slides. Dr. Korn followed with a discussion of Recent Advances in Our Knowledge of Heart Disease.

Paul H. Jordan, M.D., Secretary.

Jefferson County

The Jefferson County Medical Society met Tuesday, April 22, in Fairfield for a dinner meeting with the following program: Subacute Bacterial Endocarditis, Benjamin F. Wolverton, M.D., of Cedar Rapids, and the Graham-Cole Test, Arthur W. Erskine, M.D., also of Cedar Rapids. Interesting and stimulating dis-

cussion followed the reading of these two papers. A number of visitors were present from surrounding towns, the total attendance being about twenty-five.
J. S. Gaumer, M.D., Secretary.

Johnson County

Franklin C. McClean, M.D., head of the department of internal medicine at the University of Chicago, was the speaker at a meeting of the Johnson County Medical Society held Thursday, May 12, in the medical amphitheater of the University hospital. Dr. McClean was introduced by Dr. Andrew H. Woods, director of the psychopathic hospital, and spoke on the Relation of Psychiatry to General Medicine.

Linn County

The regular meeting of the Linn County Medical Society was held Thursday, May 19, at the Roosevelt Hotel in Cedar Rapids, with Carl R. Moore, M.D., of the zoological department of the University of Chicago, as the speaker, reading a paper on Reactions and Function of the Testicle, and Rejuvenation. This paper was discussed by Nathaniel G. Alcock, M.D., of Iowa City. Election of officers resulted in Dr. Roy K. Keech being elected president, and Dr. George W. Gearhart, of Springville, being named vice president. Drs. T. Frank Hersch and Emma J. Neal were unanimously re-elected secretary and treasurer.

Louisa County

Thursday, April 14, the Louisa County Medical Society met in regular monthly session at Letts, where a six-thirty dinner was served, after which two Muscatine physicians furnished the scientific part of the program, T. F. Beveridge, M.D., reading a paper on Head and Spine Injuries, and L. C. Howe displaying pictures of the skull and spinal column.

Marion County

The members of the Marion County Medical Society met Friday, April 29, for their regular April meeting. The afternoon session was held in the Memorial hall and included a lung clinic and demonstration by John H. Peck, M.D., of Des Moines, and a heart clinic by W. E. Sanders, M.D., also of Des Moines. In the evening two splendid lectures were given. Dr. Sanders spoke on Cardiac Pathology and presented a number of heart specimens. Dr. Peck talked on Diagnosis of Pulmonary Tuberculosis. Both of these lectures were illustrated and very interesting to those privileged to hear them.

C. S. Cornell, M.D., Secretary.

Monona County Annual Meeting

Dr. F. J. Stodden, of Mapleton, was elected president of the Monona County Medical Society at the annual meeting held Tuesday, April 26. Other officers are: Dr. P. G. Ingham, of Mapleton, vice president, and Dr. E. J. Liska, of Ute, secretary and treasurer.

Polk County Meetings

Tuesday, April 26, the Polk County Medical Society met in regular session for the following program: Diphtheria Immunization, Harry E. Ransom, M.D., newly appointed city health commissioner; Immunization for Diphtheria from the Viewpoint of the Schools, Fred Moore, M.D.; Vitamins, Donald H. Kast, M.D.; and Clinical Neurology and the General Practitioner, Tom B. Throckmorton, M.D. Approximately ninety members and guests attended.

The regular May meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Fort Des Moines Hotel, Tuesday, May 31. The scientific session was opened with a Report of a Case of Intracerebral Hemorrhage, H. B. Henry, M.D. A symposium on anesthesia was conducted by E. Parish Lovejoy, M.D., John Connell, M.D., and John Russell, M.D. Following the symposium a motion picture on spinal anesthesia was shown through the courtesy of the H. A. Metz Laboratories. Refreshments were served at the conclusion of the session and many members remained to enjoy cards and conversation. One hundred members and guests were in attendance at this, the final meeting before the usual summer recess.

L. K. Meredith, M.D., Secretary.

Scott County

Arthur Steindler, M.D., professor of orthopedic surgery at the State University of Iowa, was the speaker at the meeting of the Scott County Medical Society held Tuesday, May 10, at the Davenport Chamber of Commerce. Dr. Steindler delivered an illustrated lecture on Periarthritis of the Shoulder Joint.

Tama County

Members of the Waterloo City Medical Society were guests of the Tama County Medical Society, Friday, April 22, when about sixty members of the two organizations met at Dysart. F. R. Peterson, M.D., of the State University of Iowa College of Medicine, delivered the scientific address of the evening, taking as his subject, Carcinoma of the Breast.

Worth County Annual Meeting

Dr. G. S. Westly, of Manly, was elected president of the Worth County Medical Society at a meeting held in Northwood, Tuesday, April 26. Dr. C. W. Sanders, of Northwood, was named vice president and Dr. C. A. Hurd, also of Northwood, was re-elected secretary and treasurer.

Northwest Iowa Medical Society

The regular spring meeting of the Northwest Iowa Medical Society was held in Sheldon, Thursday, April 28. Following the six-thirty banquet, Henry W. Meyerding, M.D., of the Mayo Clinic, Rochester, spoke on Fractures of the Humerus. Dr. L. R. Woodward, of Mason City, was present and led a legislative discussion on the Perkins, Haskell-Klaus law and the proposed changes. Two of the candidates for state

senator from that district were present and made short addresses.

Waterloo Medical Society

Henry W. Meyerding, M.D., of the Mayo Clinic, Rochester, read a paper on Diseases and Injuries to Bones and Joints, at the regular meeting of the Waterloo Medical Society, Tuesday, April 19.

Hahnemann Medical Association Elects Officers

Dr. Carl C. Bickley of Waterloo, is the newly elected president of the Hahnemann Medical Association of Iowa, being named to that position at the annual meeting held in Des Moines, Tuesday, May 17. Other officers are: Dr. Fred Alden of Des Moines, vice president; Dr. Alice I. Ross of Whittier, secretary, and Dr. Alice Humphrey Hatch of Des Moines, treasurer.

New Officers For Iowa Medical Women's Society

Dr. Emma Ackerman of Sioux City, has been elected to serve as president of the State Society of Iowa Medical Women for the ensuing year. Dr. Eleanor Hutchinson, who has just recently moved to Woodward from Madison, Wisconsin, was named vice president, Dr. Julia Ford Hill of Des Moines, secretary, and Dr. Jeannette Dean Throckmorton of Des Moines, was re-elected treasurer.

AUXILIARY NEWS

State Auxiliary Elects New Officers

Mrs. William A. Seidler, of Jamaica, was chosen president-elect of the Auxiliary to the Iowa State Medical Society at the recent annual meeting held in Sioux City. Other officers are: Mrs. P. B. McLaughlin, of Sioux City, president; Mrs. C. W. McLaughlin, of Washington, first vice president; Mrs. J. C. Donahue, of Centerville, second vice president; Mrs. James A. Downing, of Des Moines, third vice president; Mrs. P. W. Beckman, of Perry, fourth vice president; Mrs. W. W. Bond, of Des Moines, secretary; Mrs. William Jepson, of Sioux City, treasurer; and Mrs. B. A. Bowers, of Sioux City, and Mrs. L. R. Woodward, of Mason City, directors.

The following bulletin, issued by the Woman's Auxiliary Advisory Committee of the Council of the Iowa State Medical Society, expresses an official view of the value of the Woman's Auxiliary to organized medicine and is herewith published for your information and guidance:

A Woman's Auxiliary to the county medical society should be a part of each county organization. The opportunities and obligations of such an organization are very apparent. Of necessity, the medical profession should and must do considerable education of the laity in medical matters. The Maternity and Child Hygiene program of the State Department of Health will be encouraged by the Council, as representing the state society. This is the correct thing to do. Medical education of the laity should come

from but one source—the Iowa State Medical Society. The active and willing cooperation of Dean Houghton of the State University and of Dr. Steelsmith of the State Department of Health are assured. Wives of the doctors have representation in every woman's organization in the county and can exert a potent influence in seeing that any reputable medical education is presented wherever the opportunity offers.

We have no desire to see State Medicine and firmly believe that the medical profession and related organizations owe themselves a duty—as well as a public duty—to meet fairly and squarely the facts of the present day. We, therefore, urge that the county society offer its good offices to the ladies in order to organize a Woman's Auxiliary.

Woman's Auxiliary Advisory Committee,
C. A. Boice, Chairman.

In the March *Bulletin* letter of Mrs. Freeman is a paragraph containing a message Mrs. Freeman would like conveyed to all Auxiliary women. You will agree with its timely reasonableness:

"Records lead me to another thought in regard to Auxiliary reports in state medical journals. May I offer a suggestion? It's entirely proper to publish the names of new officers and committee chairmen, but it's distinctly disappointing to read only that Mrs. John Jones reported for the Public Health Committee and Mrs. Samuel Smith for Public Relations, and to find all the rest of the valuable space—that costs the Medical Society good hard cash—devoted to social trivialities. Can't we safely assume that Mrs. Thomas Townsend was a gracious hostess, that the ribbons matched the flowers, that there was no salt in the ice cream, and that piano, violin and voice were in tune? The State Journals are so generous in the space they give the Auxiliaries that I do feel that we ought to report the work planned and actually accomplished by Mrs. Jones and Mrs. Smith and their committees instead of stressing food, decorations and musical programs. Reports of committee work are bound to be full of helpful suggestions for other Auxiliaries, and in the last analysis we are organized for a serious purpose and are interested in each other's progress toward the goal."

Delaware holds first place in this month's news with a unique undertaking. This state boasts among its honored citizens Miss Emily F. Dissell, president of the Anti-Tuberculosis Society and originator of the Christmas seals. (Do you know that these seals are now eagerly sought by collectors, and that only one complete file of the twenty-five is in existence?) Mrs. Tomlinson, president of the Delaware Auxiliary and national vice president, conceived the brilliant idea of enlisting the Anti-Tuberculosis Society in the campaign for periodic health examinations that goal dear to the medical heart, chief ally in the fight against the White Plague. A program for health examination is now in progress more thorough and intensive than any hitherto known. Beside the Auxiliary, it includes five other state organizations, and there have already been distributed sixteen bill-

board posters; twelve "talkies"; seven movies; 180 street car posters; to doctors, 100 Koch's translations; to teachers, press and doctors, 1,000 Koch's announcements; newspaper articles totaling 432 inches; 30 newspaper stories; two radio talks; 39 addresses by physicians and other qualified persons before schools and clubs; 27 special school periods; 617 personal letters; and 49,050 leaflets, *Go to Your Doctor for Physical Examination*. (Please note that phrase, "Go to your Doctor," the man who understands you and can best judge your condition.) Distribution has been made through 45 channels—gas and electric bills, banks, theatres, movies, clubs, schools, libraries, the University, and various men's and women's organizations. The work is being done by the Anti-Tuberculosis Society, who pays the bills, but the moving spirit is one of our most highly valued Auxiliary members, Mrs. Robert W. Tomlinson. This campaign ranks with the Minnesota High School Radio Contests as an ideal exponent of the method of working through other organizations, the Auxiliary suggesting and guiding the work as approved by the medical societies. Please page all public relations chairmen, Auxiliary and Medical Society alike!

INTERESTING NEWS

In Brief

Norman Baker, of Muscatine, enjoined from the practice of medicine by an Iowa court last year, is again in the toils of the law. The attorney general's office, charging defiance and violation of the injunction, has secured an order from Chief Justice Henry F. Wagner requiring Baker to appear and show why he should not be punished for contempt in connection with his continued operation of the Baker Institute. Conviction of the charge carries a maximum penalty of three years imprisonment.

If a time-honored professional code regarding newspaper advertising is to be broken it seems particularly fitting to many that such an innovation should come from America's pioneer society, the Medical Society of New Jersey, chartered in 1766. The Hudson County (New Jersey) Society has approved and started a series of newspaper advertisements "to protect the public against irresponsible and unscrupulous practitioners of the healing art."

In order to conserve time for employees of the Pullman company a mandatory rule was adopted about six years ago demanding that every employee in an industrial shop wear goggles while at work. The penalty for non-observance of this rule was the dismissal of the workman. During the past six years among all the thousands of employees of the company, there has not been a single eye loss during this period.

A recent editorial in the JOURNAL entitled Dangerous Dollars, dealt with a professional charge of \$4,950 made by a California physician for the care of an Iowa patient, suffering a broken leg. The

courts have recently awarded the physician in the case \$850 which would appear to be quite ample even for superior service in such cases.

A recent study indicates that there are about 130,000,000 cases of disabling illness in the United States each year and an equal number of illnesses not producing disability. To care for the nation's health, there are a total of 1,481,000 workers, including 143,000 physicians, over 67,000 dentists, 200,000 trained nurses and 100,000 pharmacists.

Dr. Harry B. VanDyke, professor of pharmacology at the University of Chicago, has been appointed professor and head of the department of pharmacology at Peiping Union Medical College, Peiping, China. Dr. VanDyke has been on the faculty of the University of Chicago since 1924.

Dr. Dean DeWitt Lewis, Baltimore surgeon, won the presidency of the American Medical Association for 1933 at the recent session of the association in New Orleans. Surgeon General Hugh S. Cummings, of Washington, D. C., and Dr. Walter L. Bierring, of Des Moines, were respectively second and third candidates.

Major General Mathew (Matt) A. Tinley, of Council Bluffs, who has served as president of the Council Bluffs Medical Society and vice president of the Iowa State Medical Society, and a veteran of three wars, has been prominently named for democratic nomination for vice president of the United States.

To house the Waterloo Medical Society and to furnish their members a place "for relaxation and recreation away from the press of their professional duties," Waterloo physicians have begun construction on a \$6,000 "cabin" on a wooded three acre tract on the high bluff overlooking Cedar river.

The board of supervisors and the Wright County Medical Society entered into a contract whereby the latter agreed to take care of indigent poor for the ensuing year for the aggregate sum of \$2,100. This is an increase of \$350 over last year's contract.

Dr. Morris Rosenthal, of New York, who has been gathering statistics on physicians' incomes, is quoted as saying that a man would do better to study plastering or carpentering than to "waste six years and \$28,000 learning the pill and ointment business."

A tumor clinic has been organized at the University of Chicago to afford a closer cooperation between the departments of surgery, gynecology and roentgenology in the treatment of neoplastic diseases and such other cases as require radiation therapy.

The editorial board of the *American Journal of Cancer* gave a dinner, April 5, at the New York Athletic Club in honor of Dr. Joseph Colt Bloodgood,

Baltimore, a member of the board who was leaving to give a series of lectures in Europe.

The campaign against drug addiction being carried on by American scientists and physicians under the auspices of the National Research Council will be financed for the next three years by the Rockefeller Foundation.

A department of medical illustration has recently been established at Temple University in affiliation with the School of Medicine. William Brown McNett, medical artist and illustrator, has been appointed director.

A very substantial deposit of high grade mineral yielding radium in profitable amounts has been discovered in Canada. This source should add materially to the world's radium supply, now estimated at 600 grams.

Following the example set by the American Medical Association in its recent annual session, the House of Representatives Ways and Means Committee have declined to consider the Hancock bill legalizing birth control.

In a recent report of the Committee on the Costs of Medical Care, it is stated that more than ten million persons, or approximately one in every twelve inhabitants, are treated each year in the hospitals of the United States.

Medical care of the poor will cost Marshall county \$4,000 for the year ending March 31, 1933, instead of the \$2,000 heretofore paid, if the contract tendered by the medical society is accepted by the supervisors.

A survey of the students of the University of Pennsylvania School of Medicine, as made by four faculty members, would indicate that medical students are particularly apt to develop tuberculosis.

When the roster of University of Iowa graduates was read on June 6, the green and black hood of Doctor of Medicine was placed upon the shoulders of eight women.

The birth rate per 1,000 population for the registration areas of the United States has declined from about 24 in 1921 to less than 19.

PERSONAL MENTION

Dr. W. L. Downing of Le Mars, delivered an address at the afternoon session of the American Legion's Ninth District Meeting, held in Cherokee, Wednesday, May 18, taking as his subject, "Civilian and Veteran's Hospital Situation from the Standpoint of the Veteran and the Medical Profession."

Dr. William L. Donnelly of Davenport, is opening

offices at Clinton also, and will be associated with Dr. F. M. Keefe in the Wilson Building.

Dr. J. D. Lowry of Fort Dodge, was elected president of the State Board of Health at the annual meeting of that organization held in Sioux City at the same time as the state medical society annual meeting.

Dr. Frederick J. Swift of Maquoketa, spoke on various health topics at the last meeting of the Community School Club, Friday, April 29, at Elwood.

Dr. E. T. Plowman, formerly of Mt. Pleasant, has located in Lockridge, where he will continue the practice of medicine.

Dr. W. J. Herrick of Ottumwa, spoke on "Why a Family Physician," at the weekly radio health talk period sponsored by the Ottumwa Y. M. C. A. over station WIAS, Wednesday, April 27.

Dr. D. F. Crowley of Des Moines was elected president of the Creighton University Alumni Club at its organizational meeting held in Des Moines, Tuesday, April 19.

Dr. Arthur M. Sonneland, who has practiced fifteen years at Norfolk, Nebraska, has located in Spencer, and entered into a partnership with Dr. Charles C. Collester.

Dr. Margaret A. Fleming of Cherokee, women's physician at the state hospital for the insane, was named temporary head of the hospital until a permanent successor to the late Dr. George Donohoe is appointed.

Dr. Martin D. Ott of Davenport, conducted a round table discussion on "The Nature and Prevention of Contagious Diseases Among School Children," at a Parent-Teacher Association meeting, held in Davenport Tuesday, May 17.

Dr. Clarke W. Mangum, now at Iowa City, and more recently of Iowa Falls, has been transferred to the Mount Pleasant State Hospital, and is reporting for duty there immediately.

Dr. C. J. Lohmann of Burlington, spoke before the Lutheran Brotherhood Club, Friday, May 13, on "The History of Medicine".

Dr. George H. Miller, associate professor of theory and practice at the College of Medicine, Iowa City, has resigned and is leaving the university July first to accept the deanship of the College of Medicine at the American University of Beirut in the French mandate territory of Syria.

Dr. Edwin C. O'Connor of Aplington, Wisconsin, is locating in Alta Vista, which has been without a

physician for some time. Dr. O'Connor is a graduate of Loyola University, and served his internship at Mercy Hospital, Chicago.

Dr. A. Trevenning Harris, formerly of Sioux City, has moved to Sheldon, where he is to be associated in the practice of medicine with Dr. G. E. Vermeer.

Dr. C. A. Soe, formerly of Portales, New Mexico, arrived in Greenfield recently with his wife and small daughter, and is now engaged in the practice of medicine there.

MARRIAGES

Miss Jewell Russell of Montezuma, Georgia, and Dr. G. Raymond Johnson of Ottumwa, were united in marriage at Oak Park, Illinois, May 7. After an extended motor trip through the east and south, Dr. Johnson and his bride will be at home in Ottumwa.

The marriage of Miss Sarah McMillan of Burlington, and Dr. Theodore Scharle of Dubuque, took place in Burlington, May 11. The honeymoon is being spent in the east, after which Dr. and Mrs. Scharle will be at home in Dubuque.

Wednesday, May 18, Mrs. Alice M. Little of Prairie City, and Dr. F. E. Boyd of Colfax, were married in Omaha, Nebraska. Immediately following the ceremony, the couple left for Colorado Springs to spend a short vacation before returning to Colfax, where Dr. Boyd has been in practice for some time.

DEATH NOTICES

Dewey, William H., of Merville, died May 18 at the age of seventy-two, after an illness of several months. He was graduated in 1884 from the State University of Iowa College of Medicine, and had long been a member of the Woodbury County Medical Society.

Donohoe, George, of Cherokee, died at the age of fifty-six, in a Rochester hospital, May 13, following a serious operation. He was graduated in 1898 from Harvard Medical College and at the time of his death was a member of the Cherokee County Medical Society.

Eiker, Bert L., of Leon, died May 6, at the age of sixty-one as the result of a sudden attack of pneumonia. He was graduated in 1896 from Rush Medical College and at the time of his death was a member of the Decatur County Medical Society.

Morgan, William G., of Woodward, died May 17 at the age of sixty-five, after a three days' illness. He was graduated in 1891 from Rush Medical College and at the time of his death was a member of the Dallas-Guthrie Medical Society.

Narrley, George R., of Keokuk, died May 8, at the age of fifty-four, in a Rochester hospital. He

was graduated in 1909 from the St. Louis College of Physicians and Surgeons and at the time of his death was a member of the Lee County Medical Society.

IMPROVED ILLUMINATION OF X-RAY FILMS

During the past few years, much research has been devoted to the development of films for x-ray work which have a greater sensitivity and which give a greater definition to the object x-rayed. These researches have led to the development of highly satisfactory x-ray films and by the means of especially developed technic greatly improved pictures have been produced.

Recently the Westinghouse Electrical Company has announced an improved viewing box which, because of its increased illuminating power, renders the interpretation of x-ray films more reliable. There are three new developments incorporated in the new apparatus. The first and most important is perhaps the incandescent lamp which, because of a newly discovered type of lamp filament construction, has been developed to give a far more intense light than the lamp heretofore available for this purpose. The second development is a new type of defusing glass technically known as blue daylight glass. The third development is a new type of viewing box. By means of this equipment it is reported that one may detect many delicate shadows in films which mean much in diagnosis, but which are now lost in the ordinary viewing of the film.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

At a recent meeting of the Board of Directors of the American Society for the Control of Cancer, the following officers were elected for the coming year: president, Dr. George H. Bigelow, Commissioner of Public Health, Massachusetts; vice president, Dr. James Ewing, Cornell University Medical School; secretary, Dr. Burton J. Fee, Cornell University Medical School; treasurer, Calvert Brewer; chairman of the Board of Directors, Dr. James B. Murphy, Rockefeller Institute for Medical Research.

DOCTORS AND DENTISTS INSTRUMENTS TAX EXEMPT

Dentists and surgeons are to be classified as "mechanics" under the law fixing a certain exemption from taxation on their tools and instruments, an attorney-general's opinion holds. The state board of assessment and review asked for a ruling on the law in question, which exempts from taxation "the tools of any mechanic, not in any case to exceed \$300 in actual value." Carl J. Stephens, assistant attorney-general, held the legislature intended this exemption to apply to the tools which the head of a family used "for the purpose of making his livelihood," and that it must be conceded that a dentist and a surgeon "are skilled mechanics practicing a profession."

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. ARTHUR D. WOODS, State Center

DR. FRANK M. FULLER, Keokuk

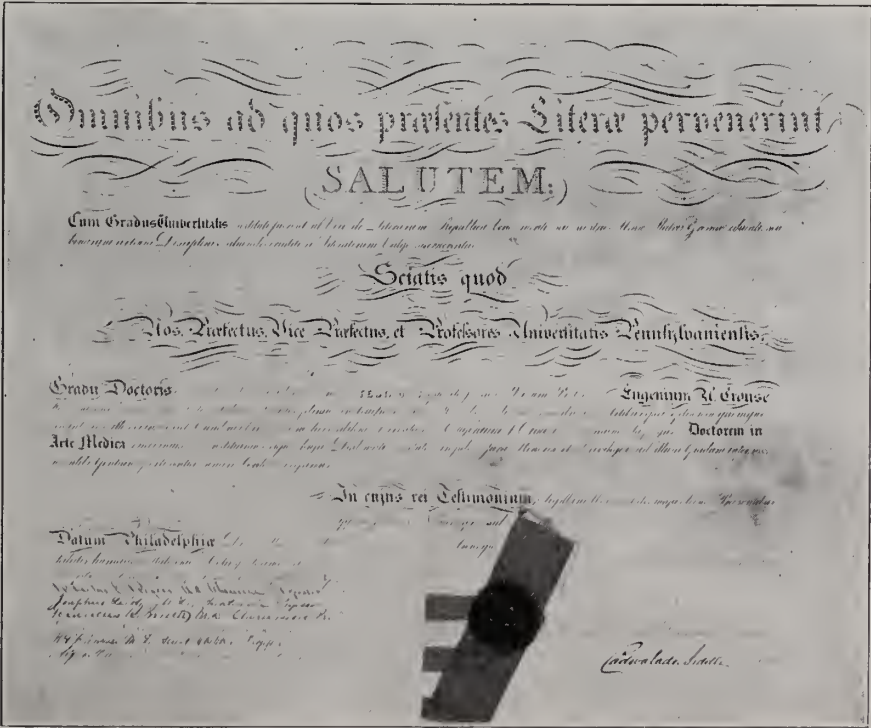
DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

Eugene M. Crouse, M.D. University of Pennsylvania 1847-1932

Sixty years of continuous medical practice in Grundy County, Iowa, came to a close with the death of Dr. Eugene A. Crouse on April 8, 1932, at the age of eighty-five years. He died "in the harness" as the end came while crossing the lawn to his garage, in the garden and among the flowers that had always been his pride and pleasure.

from the University of Pennsylvania. His diploma is published herewith, and the appended signatures recall some interesting names of distinguished teachers in this pioneer American medical school. Dr. Joseph Leidy was the leading American anatomist of his time. Minot records that he discovered the bacterial flora of the intestines in 1849, and made



He was born in Chester County, Pennsylvania, January 25, 1847, and received his early education in the school of the community and at the Millersville Normal School in Lancaster.

On March 10, 1870, he was graduated in medicine

the first experiment in transplanting malignant tumors in 1851. "Like Gerhard and Gross he belonged to that fine type of German-American physicians, as modest and unassuming as he was learned and versatile."—Garrison. Dr. H. H. Smith

was one of the best known teachers of surgery of that period. He was succeeded in 1871 by Dr. D. Hayes Agnew. Dr. R. A. F. Penrose was the first of a distinguished line of professors of obstetrics in the University of Pennsylvania.

The outstanding member of the medical faculty, aside from Leidy, was Dr. Alfred Stille. A pupil of Louis of Paris, his teaching and writings showed the influence of his great master. His monographs on cerebrospinal meningitis and cholera were important contributions to medical knowledge. He wrote the first complete work on *Materia Medica* and *Therapeutics*, published in this country, as well as the first edition of the *National Dispensatory*.

By attendance at lectures at Jefferson Medical College, Dr. Crouse came under the further influence of such leaders as Dr. Samuel D. Gross in surgery, and Dr. J. M. DaCosta in medicine.

During the past year the attention of the dean, Dr. William Pepper, III, was directed to the fact that a graduate of the University of Pennsylvania, class 1870, was still practicing medicine in Iowa, which brought forth an interesting and appreciative letter to Doctor Crouse, expressing the hope of an early visit to his alma mater to renew old memories.

Following his graduation in 1870, he practiced for about a year in Bareville, Lancaster County, then, attracted by the possibilities of the west, he came to Waterloo, Iowa, with his cousin, Dr. D. F. Crouse, and on March 15, 1872, he came into Grundy Center on horseback where he practiced to the day of his death.

On March 15, 1922, fifty years later, the Grundy County Medical Association gave a testimonial dinner in his honor, and together with the citizens presented him with a beautiful loving cup.

Dr. Campbell P. Howard, Professor of Medicine

at Iowa City, was the guest speaker and his appreciation with the several toasts of the occasion, abounded in high tributes of regard and affection for their beloved colleague. His own comments and reminiscent remarks told an interesting story of stirring experiences connected with medical practice on the prairie "when roads were primitive, few bridges over the streams, and during the summer season most of the sloughs were without bottoms." He stated that he had covered more than 300,000 miles with horses, having owned and driven 35 or 40 horses in his time. On this occasion a letter was read from Herbert Quick, the author, who was a personal friend of Doctor Crouse. A part of "Vandermark's Folly" was written while visiting at the home of Dr. and Mrs. Crouse. Monterey Center in this story signifies Grundy Center. For the fiftieth anniversary dinner the noted author wrote the following words of tribute, which seem equally fitting today: "When one looks back over the years of such service to a community, to the human ills which he has successfully coped with, to the human touch he has always given to the relations with his people, one cannot fail to realize that here we have had poured out upon one community for half a century a constant stream of good and useful actions which summed up a most beautiful and useful life."

Doctor Crouse was married on January 19, 1875, to Lydia W. Thorndike, who has been his faithful and devoted companion, shared in the hardships of the pioneer, and added sympathetic cheer all along life's pathway. Their hospitable home offered a warm welcome to every passing guest, and with its atmosphere of modest refinement and culture, left the impress of two gentle, noble souls that will linger while memory lasts.

Walter L. Bierring, M.D.

Bert L. Eiker, M.D., F.A.C.S. 1871-1932

To attain a life-long ambition, and then be cut off by death a few hours after being installed as president of the Iowa State Medical Society, was the sad fate of our colleague, Dr. Bert L. Eiker. Yet the fates were kind, for to meet at the annual session, feel the handclasp of true friendship, and pass from the scene in the fullness of life, conscious of the warm regard and affection of his fellows, was a privilege.

Doctor Eiker was a true son of Iowa, being born on a farm in Decatur County, October 8, 1871, and his entire life with its fruitful labors was spent in the confines of the county of his birth. His preliminary education was obtained in the little red schoolhouse, and the high schools of Leon. He entered the Medical Department of the State University of Iowa in the fall of 1893, remaining two years. The writer remembers him as one of the best stu-

dents in his class. He was graduated from Rush Medical College in the class of 1896, and soon afterwards began the practice of medicine in Decatur City, and after a few years removed to Leon, where he practiced the remainder of his life. He believed in the continuous plan of study, and was a frequent attendant of postgraduate courses in Chicago and elsewhere.

While developing a very extensive general practice, he devoted special attention to surgery, and was elected a Fellow of the American College of Surgeons in 1921. He was a constant attendant at meetings of the state medical society, and always took an active interest in organized medicine. As a member of important committees, and a frequent contributor to its programs, he rendered faithful service at all times. His greatest work in the society was in connection with the Committee on Medical

Education and Hospitals, established in 1929, of which he was the chairman. The committee made an extensive survey of hospitals in Iowa, particularly with reference to the Perkins, Haskell-Klaus laws for committing indigent patients to the University Hospital. This report was published in 1930, and will always be regarded as one of the most exhaustive studies made under the auspices of the state society, and bear an important relation to the future considerations of these matters.

At the Des Moines session in 1931, he was accorded the well deserved honor of election as president-elect of the state society. He was a member of the House of Delegates of the American Medical As-



sociation in 1922, 1924 and 1928, and his selection for important committees indicated the impression he made on this body.

Doctor Eiker was greatly interested in the public aspects of medicine, and through different forms of public service, lectures and writings, endeavored to enlist the interest and understanding of the public as regards the aims of modern medicine and its achievements.

He was appointed to the State Board of Health and Medical Examiners on April 10, 1906, to fill the vacancy caused by the resignation of Dr. Henry Matthey of Davenport, serving until 1913. During the last two years he served as president of the Board. We quote from the minutes as recorded January 22, 1913: "By provision of the law, which precludes a member of this Board from succeeding

himself, with this session terminates the service of one who will be missed because of his devotion to duties well performed." He served as a member of the state legislature from Decatur County in the 28th and 29th sessions.

The establishment during the past year of a modern community hospital in Leon realized one of his fondest dreams. He was chosen as the first president of the hospital staff, and lived to see the new hospital inaugurate its beneficent service to the community of Decatur County.

With all his public and professional activities, he was devoted to the family circle, and domestic happiness came to him in fullest measure. The death of his wife a year ago was felt very keenly. He often referred to her inspiring companionship as the principal factor of his success in life. Three children survive him, one son and two daughters.

In the extent of public service and devotion to professional ideals, our colleague added in fullest measure to the advancement of Iowa medicine during the past thirty-five years.

Walter L. Biering, M.D.

AN APPRECIATION

Dr. Bert Eiker has gone the way of all flesh. Just as he, with justifiable pride, was starting to act as your president the column was broken. Though life is made up of little things, with death the remains of them all, yet his untimely passing is a major tragedy that will linger long in our memories.

To me this man was more than a friend. We had worked closely together, endeavoring in a small way to justify the faith that had been placed in us—two country doctors attempting to lead this great organization of ours. We had decided that I should attempt, during my year, to bring out and focus the criticism that exists in the Society. Then throughout his term we were also to work together seeking to eliminate the causes of discontent. He was to sit beside me watching that I made no mistakes and this year I was to do the same for him. All this with but one end in view, the betterment of the Society. Granting that our original concept was correct, we failed to take into consideration forces and factors that pay no heed to human desires.

Bert wanted to be president of the Society, not for any personal glorification whatsoever, but because he believed that he could be helpful to the profession. When the gavel, the symbol of his office, was given him, realization fought itself upward from the tortured flesh and clouded brain. With his face breaking into the famous Eiker smile he grasped my hand and asked, "Chan, am I really president now?" He was particularly pleased that Dr. Myers had delivered his presidential address. We left him with the gavel fondly clasped and the smile still lining his face.

Dr. Eiker was an honest, honorable, God-fearing gentleman. Just a few weeks ago I visited him in his office. There upon his desk lay a well thumbbed

Bible. I prefer to think that strength and fortitude were given him; that his last hours were made less fearful by the contentment that he may have received therefrom.

"Yea, though I walk through the Valley of the Shadow of Death I will fear no evil. Thy rod and Thy staff—they comfort me."

"There is a word, of grief the sounding token,
There is a word bejeweled with bright tears.
The saddest word fond lips have ever spoken,
A little word that breaks the chain of years;
Its utterance must ever bring emotion,
The memories it crystals cannot die,
'Tis known on every land and every ocean,
'Tis called 'Goodbye.'"

Channing G. Smith, M.D.

RESOLUTIONS

Bert Leander Eiker, M.D.

Whereas, by death we have lost one of our most worthy physicians, B. L. Eiker. It may be truly said that Dr. Eiker represented the true ideals of a worthy member of the medical fraternity. He was a typical friend and family physician in every respect. His years of service were spent exclusively working in the cause of organized medicine. He was devoted to his family and at a time when he achieved the chief aim of his life to become the president of the Iowa State Medical Society, he contracted his fatal illness and died May 6, 1932.

Therefore, the Decatur County Medical Society, of which he was one of its leading members, regret his untimely death.

Be it further resolved that these resolutions be spread upon the records of the society, and a copy be sent to the Journal of the Iowa State Medical Society.

J. W. Wailles, M.D.
M. W. Rogers, M.D.
Fred A. Bowman, M.D.

In order that Miss Eiker's expression of appreciation may reach each member of the Society, the following letter is published:

Leon, Iowa,
May 12, 1932.

My Dear Dr. Parker:

I am writing to try to tell you how very much we—my brother, sister and I—appreciate your kindness to my father and to us. The Iowa delegation to the A. M. A. sent a message of sympathy.

I do not know many of the doctors outside our own county and that makes it difficult for me to thank them. I wish you would express to them all our deep gratitude. My brother and sister join me in wishing a successful year for the Iowa State Medical Society. If there is anything any of us can do to help make it so, please be assured of our willingness to do so.

Sincerely yours,

(Signed) Edith Eiker.

EMERGENCY HEALTH WORK IN DROUGHT-STRICKEN AREAS

By an act approved February 6, 1931, Congress made available to the United States Public Health Service the sum of \$2,000,000 for emergency health work in the drought-stricken areas. In carrying out this work a modification of the plan used for the regular cooperative rural sanitation activities was adopted, with the result that details of administration were quickly worked out with the states and field projects were under way within a short time. By June 30, 1931, there were in operation in the sixteen states within drought areas, 333 field organizations, including projects covering 395 counties. The work carried on has consisted in the activities usually conducted by full-time county health units, with special emphasis upon the prevention of communicable diseases by general immunization, the sanitation of milk and water supplies, the improvement of excreta disposal conditions, and attention to the health of infants, children and mothers. It is believed that many of the temporary units organized will serve to stimulate the future establishment of permanent health departments supported by local funds.

QUALIFICATIONS FOR THE SPECIALIST

The annual report of the Committee on Medical Education of the New York Academy of Medicine states that the subcommittee on the training of specialists has found that most of the efforts made to raise the standard of specialists consist in demanding certain minimum requirements of candidates before they are considered eligible for admission to membership in various national organizations.

The subcommittee concluded that it is important to provide opportunities for study and practical work for all those desirous of entering a specialty. Provision for these opportunities for advanced study and experience is to be secured through the coordinated assistance of deans of medical schools and representatives of selected hospitals. To this end the "Board for Advanced Medical Education" has been formed. This board will establish minimum requirements for the training and experience in the various specialties, and in cooperation with the medical schools and hospitals create opportunities for instruction in the basic sciences and for practical work by means of residencies in the member hospitals.

MALLINCKRODT INSTITUTE OF RADIOLOGY

The Edward Mallinckrodt Institute of Radiology has been placed in operation at the Washington University School of Medicine, St. Louis. The eight-story building is furnished with apparatus, equipment, an endowment and an investment of \$1,220,000. The plan of housing a large roentgen ray department in one building is said to be entirely new. Six of the eight floors open on the main corridors of Barnes Hospital. The building is connected with the children's hospital by tunnels.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***BODY MECHANICS**—Education and Practice. (Section I, Medical Service, Samuel McC. Hamill, M.D., Chairman.) Publication of the White House Conference on Child Health and Protection. The Century Company, New York, 1932. Price, \$1.50.
- ***CALCIUM METABOLISM AND CALCIUM THERAPY.** By Abraham Cantarow, M.D., Assistant Demonstrator of Medicine in the Jefferson Medical College, Philadelphia. 215 pages, illustrated. Lea & Febiger, Philadelphia, 1931. Price, \$2.50.
- ***FEMALE SEX HORMONOLOGY.** By William P. Graves, M.D., F.A.C.S., Professor of Gynecology, Harvard Medical School. 131 pages, with illustrations. W. B. Saunders Company, Philadelphia and London, 1931. Price, \$3.50.
- ***GYNECOLOGY FOR NURSES.** By Philip J. Reel, M.D., F.A.C.S., Assistant Professor of Surgery, College of Medicine, Ohio State University. 282 pages, with 81 engravings. F. A. Davis Company, Philadelphia, 1932. Price, \$2.50.
- ***MEDICAL CLINICS OF NORTH AMERICA** (Boston Number, January, 1932). Vol. 15, No. 4. (Issued serially, one number every other month.) 268 pages with 18 illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Per clinic year, July, 1931 to May, 1932. Paper, \$12.00; cloth, \$16.00.
- ***A NON-SURGICAL CONSIDERATION OF PROSTATIC ENLARGEMENT**, including a lecture on The Myth of the Bladder Neck Bar, by Edwin W. Hirsch, M.D., associate in urology, College of Medicine, University of Illinois; urologist Englewood Hospital, Chicago. Bruce Publishing Company, St. Paul, 1931.
- ***NOTES ON CHILDREN'S NURSING.** By Margaret C. Erxleben, R.N., B.S. Director of Instruction, The Children's Hospital of Philadelphia. 243 pages, with 43 engravings. F. A. Davis & Company, Philadelphia, 1931. Price, \$2.00.
- ***PHYSICIANS' MANUAL OF BIRTH CONTROL**—By Antoinette F. Konikow, M.D.—Buchholz Publishing Company, New York, 1931.—Price, \$4.00.
- ***PSYCHOLOGY AND PSYCHIATRY IN PEDIATRICS: THE PROBLEM.** (Section I, Medical Service, Samuel McC. Hamill, M.D., Chairman.) Publication of the White House Conference on Child Health and Protection. The Century Company, New York, 1932. Price, \$1.50.
- ***THE SEX FACTOR IN MARRIAGE**—By Helena Wright, M.D., B.S.—with Introductions by A. Herbert Gray, M.A., D.D., and Abel Gregg, A.B., M.A.—The Vanguard Press, New York, 1931.—Price, \$2.00.
- ***SURGICAL CLINICS OF NORTH AMERICA.**—(Chicago Number)—Vol. 12, No. 1, February, 1932—(Issued serially, one number every other month.)—240 pages with 92 illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Per clinic year (February, 1932, to December, 1932)—Paper, \$12.00; Cloth, \$16.00.
- ***SURGICAL CLINICS OF NORTH AMERICA**—(Philadelphia Number—December, 1931) Volume 11, No. 6—309 pages with 87 illustrations.—Per Clinic Year (February, 1931, to December, 1931.)—Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London.—W. B. Saunders Company, 1931.
- A TEXT-BOOK OF CLINICAL NEUROLOGY**—By Israel S. Wechsler, M.D., Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, Neurological Institute and the Montefiore Hospital, New York City, Second Edition, Revised. 759 pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931.—Cloth, \$7.00 net.
- ***A THOUSAND MARRIAGES.** A Medical Study of Sex Adjustment. By Robert Latou Dickinson and Lura Beam, with an introduction by Havelock Ellis. Prepared under the auspices of the National Committee on Maternal Health. The Williams & Wilkins Company, Baltimore, 1931. 482 pages. Price, \$5.00.
- ***THE VITAMINS.** By H. S. Sherman, Mitchell Professor of Chemistry, Columbia University, and S. L. Smith, Senior Chemist, Office of Experiment Station, U. S. Dept. of Agriculture. Second edition, revised. 575 pages, illustrated. The Chemical Catalog Co., Inc., New York, 1931. Price, \$6.

* Book Review in this issue.

BOOK REVIEWS

BODY MECHANICS

Education and Practice. (Section I, Medical Service, Samuel McC. Hamill, M.D., Chairman.) Publication of the White House Conference on Child Health and Protection. The Century Company, New York, 1932. Price, \$1.50.

This volume has been prepared as a result of the studies of the subcommittee on Orthopedics and Body Mechanics of the White House Conference on Child Health and Protection. This searching investigation indicates that not less than two-thirds of the young children of the United States exhibit faulty body mechanics. The report further shows that improvement in body mechanics is associated in a corresponding fashion with improvement in health and efficiency.

This subject has been investigated in medical schools; schools of physical education; public, parochial and private schools, and in hospitals and health centers located in widely scattered areas of the United States.

An important distinction is made between training in the principles of good body mechanics and training in various physical exercises. The detailed recommendations and the suggested program of corrective exercises presented will be of value to all those concerned with the care and training of children. The volume contains many charts and drawings.

CALCIUM METABOLISM AND CALCIUM THERAPY

By Abraham Cantarow, M.D., Assistant Demonstrator of Medicine in the Jefferson Medical College, Philadelphia. 215 pages, illustrated. Lea & Febiger, Philadelphia, 1931. Price, \$2.50.

During the past decade much has been added to the sum total of our knowledge concerning the chemistry of the organic and inorganic elements within the body. In many instances, however, our knowledge is still imperfect and remedial agents have been employed, of which we have but little accurate knowledge of their physiologic action within the organism. For this reason, it is indeed timely that a volume should be written discussing the uses of calcium and the requirement for calcium in the body mechanism. Certain facts pertaining to this extremely important subject have been well established, and in this volume the author presents these facts in clear and concise form. Fundamentally in a consideration of this subject one must understand the calcium requirements of the body and their relation to other substances, notably the vitamins. Chapter one of the volume discusses this problem, while chapter two discusses the problem of calcium excretion and the maintenance of a calcium balance within the tissues. The final chapter of part one

discusses the effect of calcium upon growth, the coagulation of the blood, its part in establishing and controlling nervous impulses, and its function in maintaining the acid-base equilibrium of the blood stream.

Part two is devoted to a discussion of abnormal calcium metabolism, detailing those conditions which upset the blood calcium level and alter the distribution of this salt throughout the body. Part three discusses calcium therapy, indicating a correct selection of the drug and the dosage required. Under appropriate headings, the various abnormal conditions resulting from a deranged calcium metabolism are outlined and extended comments made concerning the proper calcium therapy for the relief of the specific conditions. Adding to the volume as a source book, there is appended an extended bibliography covering all the newer literature on this important subject.

FEMALE SEX HORMONOLOGY

By William P. Graves, M.D., F.A.C.S.,
Professor of Gynecology, Harvard Medical
School.—131 pages, with illustrations.—
W. B. Saunders Company, Philadelphia and
London, 1931.—Price, \$3.50.

This volume, according to the author, has been prepared in connection with the teaching of gynecology and is developed along chronologic lines indicating, step by step, the advances in this branch of medical practice.

The author first discusses the experimental evidence that the ovary is a gland of internal secretion and compares the sex cycle in human beings with that in animals. A most interesting chapter is devoted to the discussion of the sex cycle of the human uterus and its correlation with that of the ovary. In other chapters, he discusses the researches conducted toward the discovery of hormones, or the active principle of the ovaries as they affect the sexual cycle, correlating these findings with the hormones of the anterior lobe of the pituitary body. He discusses the new theories regarding menstruation, parturition and lactation, and finally presents the organotherapy of dysfunction of the female sex organs. The volume is intended for physicians who, because of their interests or lack of time, have not been able to keep abreast with the newer developments along these lines. The author does not assume an extensive knowledge on the part of the reader of these researches, which renders the volume valuable alike to the busy practitioner or the medical student.

A selected bibliography is appended.

GYNECOLOGY FOR NURSES

By Philip J. Reel, M.D., F.A.C.S., Assistant Professor of Surgery, College of Medicine, Ohio State University.—282 pages, with 81 engravings.—F. A. Davis Company, Philadelphia, 1932.—Price, \$2.50.

This interesting text on Gynecology for Nurses,

though brief, covers the field in a thorough and practical manner.

It is divided into eighteen chapters, describing the anatomy and physiology of the female genitalia, diseases of the external and internal genitals with an entire chapter devoted to venereal diseases.

One section of the book is devoted to the patient, her examination, preparation for operation, anesthesia and postoperative care.

The last five chapters of the book deal with gynecologic and operative treatment, operating room equipment and personnel and preparation of the field for operation.

While not profusely illustrated, there are sufficient drawings and pictures to illustrate the points in the discussion.

On account of its practical application it could well be in the library of every nurse doing either office or private duty.

F. W. R.

MEDICAL CLINICS OF NORTH AMERICA

(Boston Number—January, 1932.)—Vol. 15, No. 4.—(Issued serially, one number every other month.)—268 pages with 18 illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Per Clinic Year, July, 1931, to May, 1932.—Paper, \$12.00; Cloth, \$16.00.

This volume, prepared by physicians of Boston, maintains the established high character of this work. Among the outstanding contributions is a discussion of chronic arthritis with remarks concerning its prevention and treatment, diabetic coma, the treatment of exophthalmic goiter, jaundice and its clinical significance, the use of insulin in malnutrition and the clinical course of malignant hypertension.

A NON-SURGICAL CONSIDERATION OF PROSTATIC ENLARGEMENT

Including a lecture on The Myth of the Bladder Neck Bar, by Edwin W. Hirsch, M.D., associate in urology, College of Medicine, University of Illinois; urologist, Englewood Hospital, Chicago. Bruce Publishing Company, St. Paul, 1931.

During the past two to three years a great deal of attention and study has been given to the causative factors of prostatic hypertrophy and the author of this booklet of seventy-four pages presents this subject in an interesting manner. Infection plays a predominant role in production of prostatic disease as Ciechanowski contended long ago and not until recently is credit given to this view. The author rightly stresses correction of local hygiene, removal of areas of focal infection and prostatic massage as helpful in new pathology. We are inclined to commend him in his position that an early obstructing prostate should not be subjected to surgical attack. Also, the use of intra-urethral cautery should be employed with caution. By this measure urethral

irritability can be increased at the expense of elimination of urinary retention and the result obtained from the standpoint of the patient is not a success. The subject matter is beautifully and clearly written, a worth-while acquisition to our literature on the prostate, so much of which is found to be entirely useless.

W. R. H.

NOTES ON CHILDREN'S NURSING

By Margaret C. Erxleben, R.N., B.S., Director of Instruction, The Children's Hospital of Philadelphia.—Illustrated with 43 engravings.—F. A. Davis and Company, Philadelphia, 1931.—Price, \$2.00.

This volume is a combined text and pediatric manual with blank pages for classroom notes, and covers the general routine duties, preparation of food, procedures and treatments employed in pediatric nursing.

It is very elementary in character, and fully covers the routine duties of a pediatric nurse.

D. M. B.

PHYSICIANS' MANUAL OF BIRTH CONTROL

By Antoinette F. Konikow, M.D. Buchholz Publishing Company, New York, 1931. Price, \$4.00.

Civil and ecclesiastical law has considered birth control and abortion in the same category and has legislated against both. This legislation has proved of but little value in correcting the evils of either, if such an evil exists. Birth control as a popular movement in America today is in the forefront and clinics for instructions in contraceptive methods are becoming numerous. Hundreds of books and periodicals are published and delivered to thousands of readers and test cases involving the law as related to the subject have failed to establish convictions.

This manual, like several others recently placed on the market, has been written with the thought of putting into the hands of physicians authoritative information upon contraceptive methods based upon wide experiences in clinics where birth control is openly taught and practiced. All the better known methods are discussed and their relative merits analyzed clinically and statistically. The technic of application of the methods of choice is clearly presented and the factors causing failure of the various methods carefully discussed. The book is well written and sufficiently extensive in its scope to furnish the physician a proper background of information upon which to intelligently instruct patients needing advice upon this subject.

PSYCHOLOGY AND PSYCHIATRY IN PEDIATRICS: THE PROBLEM

(Section I—Medical Service—Samuel McC. Hamill, M.D., Chairman.)—Publication of the White House Conference on Child Health and Protection.—The Century Company, New York, 1932.—Price, \$1.50.

This volume, one of a series reporting the work

of the White House Conference on Child Health and Protection, surveys the fields of psychiatry and psychology in their pediatric relations, defines the proper scope of psychiatry and psychology, tells what is being done in the way of psychiatric clinics for children and attempts to decide by means of questionnaire, report and discussion just how far the pediatrician should go in psychiatric matters. It is concluded for good and sufficient reasons that he should develop a "psychiatric intelligence" and acquire, according to his interest and aptitude, a certain portion of the psychiatrist's "technical resources" to the end that the management of a majority of child guidance problems may remain where they belong, in the hands of the child's regular physician.

The book is in no sense a text book but it contains much valuable, well presented and thought provoking information and maintains throughout an optimistic attitude toward the future of the problem—both factors being certain proof of the far reaching and beneficial effects of the White House Conference.

R. C. D.

THE SEX FACTOR IN MARRIAGE

By Helena Wright, M.D., B.S., with introductions by A. Herbert Gray, M.A., D.D., and Abel Gregg, A.B., M.A. The Vanguard Press, New York, 1931. Price, \$2.00.

The present age is one marked by frankness in sex matters and whether we approve or not, the youth of today will know more of the mysteries of the sex life at sixteen than their parents know at sixty. With all of our free speech and free love, perfection in married life is not the rule. A lack of mutual adjustment in the sexual relation is the greatest single factor in broken homes today. In full appreciation of these facts, the author of this volume presents a frank, colorful, and exact discussion of the technic of married life and does so in a wholesome way which will not offend even the most delicate sensibilities. "The volume is addressed to those about to be married, in the hope that it may save them from mistakes and sufferings which have darkened married life for thousands of couples."

This book is the frankest treatise of the sex factor in marriage which has come to our attention and one which the thoughtful physician may successfully recommend to those patients entering a marriage relationship and who deserve intelligent guidance.

SURGICAL CLINICS OF NORTH AMERICA

(Chicago Number)—Vol. 12, No. 1, February, 1932—(Issued serially, one number every other month).—240 pages with 92 illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Per clinic year (February, 1932, to December, 1932).—Paper, 12.00; Cloth, 16.00.

Abdominal actinomyces is thoroughly discussed by Dr. Arthur Dean Bevan. History of the disease

and the evolution of treatment is given with the discussion of cases and present therapy. He also gives a common sense presentation on perforated peptic ulcer. Fractures are discussed by Drs. Rynerson, McKenna, Christopher and Compere. Dr. Loyal Davis has an interesting report on intracranial meningiomas. Juvenile thyrotoxicosis is discussed by Dr. George Curtis. A very interesting article is presented by Dr. Golder L. McWhorter on the results and methods of reconstruction of the common bile duct, with a report on a case eight years after reconstruction.—F. W. F.

SURGICAL CLINICS OF NORTH AMERICA

(Philadelphia Number—December, 1931)

Volume 11, No. 6.—309 pages with 87 illustrations.—Per Clinic Year (February, 1931, to December, 1931.)—Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London.—W. B. Saunders Company, 1931.

This is an unusually interesting and comprehensive number. The most outstanding articles are as follows: "Laryngectomy for Carcinoma of the Larynx," by Drs. Chevalier Jackson and W. Wayne Babcock, the technic of the operative procedure is given in detail; "Treatment of Diabetic Gangrene," by Drs. Eliason and Wright, in which they stress the use of Perfungous Antitoxin on account of the large number of gas bacillus infections which they have encountered in their cases; "Modern Tendencies in the Treatment of Fractures," by Drs. Eliason and Ebeling, is a very worthwhile discussion; "Clinical Considerations Surrounding Head Injuries," by Dr. Temple Fay, is presented with special reference to water balance with dehydration. Dr. Fay in discussing treatment departs radically from the older teaching of this subject. F. W. F.

A THOUSAND MARRIAGES

A Medical Study of Sex Adjustment.—By Robert Latou Dickinson and Lura Beam, with an Introduction by Havelock Ellis.—Prepared under the auspices of The National Committee on Maternal Health.—The Williams & Wilkins Company, Baltimore, 1931.—482 pages.—Price, \$5.00.

Stimulated by the early writings in psychiatry of Krafft-Ebing and others, there have appeared on the market numerous volumes dealing with the subject of sex, and particularly sex as related to the problem of marriage. Unfortunately, most of these books have been written from the standpoint of the propagandist and impressions have been presented in lieu of facts. In the present volume, however, the authors have secured data first-hand from patients, and it is this first-hand information which forms the basis for this study. In analyzing marriages medically, the authors have not confined themselves to the physiologic aspect. They have attempted to

search the physical and psychic aspects, and as a result of their analysis present interpretations which may lead to an avoidance of marital difficulties in others. This discussion will particularly appeal to physicians, since it is a study based upon the normal rather than abnormal sex relations. The author aptly describes his book as "a work of correlation between emotional and pelvic states." Then, the sole method for planning intelligent prevention and treatment of maladjustments in marriage lies in a systematic study of the marriage relationship as existing among a wide cross-section of our population. This volume is commended as a source book for physicians interested in this problem.

THE VITAMINS

By H. S. Sherman, Mitchill Professor of Chemistry, Columbia University, and S. L. Smith, Senior Chemist, Office of Experiment Stations, U. S. Dept. of Agriculture.—Second Edition, revised.—575 pages, illustrated.—The Chemical Catalog Co., Inc.—New York, 1931.—Price, \$6.00.

The development of knowledge in all branches of science, and especially in chemistry, has been so rapid during the last fifty years and the field covered by this development has been so varied, that it is difficult for any individual to keep in touch with this progress in branches outside of his own specialty. Consequently, when men who have spent years in the study of important subjects are willing to coordinate their knowledge and present it in concise readable form, they perform a service of high value to their fellow scientists. This volume, written by eminent authorities under the direction of the American Chemical Society, presents the chemical approach to the subject of the vitamins in its entirety and up to the middle of the year 1930. The work is divided into seven chapters, each dealing with a separate vitamin, discussing both its physiologic properties and its chemical nature. To the physician, this volume will be a revelation, since in ordinary medical usage, the subject of the vitamins is approached only from the physiologic aspect.

The correlation, however, of the chemistry of the vitamins and their physiologic action is required if we are to have a well balanced, well rounded perspective relative to this problem. A most valuable aspect of the book lies in the extensive bibliography in which some 1,000 or more references are made to current literature. The volume is indexed, both as to subjects and to authors, so that the students will find this a veritable storehouse of information and a background for advanced study of this most interesting problem. The text is written in a concise and readable manner and since technicalities, such as chemical formulae, are not presented, the medical reader will have no difficulty in fully appreciating the text.

The sponsorship of this volume by the American Chemical Society guarantees its accuracy.

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A MEDICAL CLINIC*

HENRY L. ULRICH, M.D.,
Minneapolis
First Day

I have been asked to show two cases of nephritis. The first patient is sixty-seven years old. She gives a history of shortness of breath, swelling of the legs and abdomen, and blindness. Her present illness began ten years ago. She had rheumatism and was sick in bed for eight months. This affected the joints of the lower extremities, the knees and ankles and feet on both sides, although the upper extremities were not affected. The joints, when affected, remained so for several weeks and were stiff when she finally convalesced. She had her teeth extracted during that period.

The patient was never well after this, but it was not until last summer that any definite change in her progress was noted. In June of 1931 there was swelling of both ankles which has increased up to the present time. This was painless, and for the last four months has been associated with shortness of breath. There was no nocturia noted. The blood pressure was never taken until the present illness. She had a cataract of the left eye for several years. One and one-half months ago she developed sudden blindness in the right eye, which remains to date. There have been no heart complaints subjectively, no pain, irregularity or palpitation. She has slept with two pillows for many years.

She is married; has had nine children; all died in infancy. She had four brothers and sisters; all died in middle age. She denies all infections, and she has had none of the rheumatic cycles during her entire life.

When we look this patient over we find she is markedly edematous in the extremities, both upper and lower, with a tremendous amount of parietal edema, and ascites. She has a blood pressure of over 200. Her urine is scant. She has oliguria; specific gravity of 1020; 3+ albumin; few pus

cells; no casts. Her blood chemistry on May 2 was 77 milligrams of blood sugar per 100 c.c.; 92 milligrams of non-protein nitrogen, and 47 milligrams of blood-urea nitrogen. She has no fever. Her pulse rate varies from 90 to 120.

We are presented with a woman sixty-seven years old, who develops edema and ascites, and who has these splendid urinary findings, so to speak. What is our assumption in such a case? She is sixty-seven years old and develops edema in the lower extremities first and then it extends upwards. We have to think, of course, immediately of the cardiac insufficiency of this patient who has possibly had hypertension for many years and who has developed an arteriosclerosis. This has also involved the renal areas. In other words, we are here dealing entirely with a vascular condition. It is not a nephritis at all. A nephritis always means an inflammatory condition of the kidney. This is a degenerative condition of the vascular trees of the body, including the vascular tree of the kidney. So we are dealing here with a degenerative process in the kidney, also a degenerative process in the myocardium; probably a case of hypertension and arteriosclerosis, involving the coronary arteries and the renal arteries. This peculiar arrangement is not commonly considered. The hypertensive kidney gives the same urinary findings as a case of nephritis, yet we have to distinguish between this degenerative type of functional changes in the kidney as compared with the functional changes due to the inflammatory process.

If we had a true nephritis in this patient, we would have an entirely different urinary picture. In spite of the fact that this patient was not putting out much urine, the specific gravity would never go above 1010 or 1012, and might even be lower than that. In other words, the patient would have a hyposthenuria. Inability to concentrate the urine would be one of the most striking things in this case, even though it were the degenerative type of nephritis. This patient can concentrate. In the Mosenthal test made yesterday she con-

*Presented before the Eighty-first Annual Session, Iowa State Medical Society, May 4, 5, 6, 1932, Sioux City.

centrated up to 1030. That shows pretty good renal values. So this patient, if she would get rid of the edema, would not show very much evidence of renal insufficiency. This is borne out by the simple test of the concentration of the urine.

Suppose we get this patient in the proper state. Suppose we get her dried out; in other words, free from edema. What would be her general condition? She would still have her hypertension. She would still have albumin in her urine, but as far as renal activities and renal functions are concerned, she would be fairly normal. I think that it is fair to make a diagnosis of cardiorenal insufficiency, but not of nephritis. That was the point I want to make. It is not a case of nephritis; it is a case of cardiorenal insufficiency; insufficiency due to vascular changes in the heart, functional changes in the heart, and functional changes in the kidney, mostly because of chronic passive congestion, although at her age one would also expect an arteriosclerosis of the kidney. The average senile kidney will show albuminuria, and that is about all. Arteriosclerosis may produce mild renal insufficiency; it is not acute Bright's disease or chronic Bright's disease.

Our whole assumption here is that if we can get this patient's heart in shape, her edema will disappear. This process has already been started and the patient has been given salyrgan. Her physicians realized that there is no renal inflammation present, and have therefore given her salyrgan. I think she had a dose yesterday, and the effects of it will be noted. Salyrgan is one of the mercurial diuretics and is an excellent means of reducing edema in this type of case. We also give sodium nitrate in large doses, 6 to 8 grams a day. In that way the synergistic action of sodium nitrate and salyrgan produces splendid diuresis in some of these cases; although not in all.

The other means of diuresis that we have here are cardiac stimulants. One has to be a little careful about cardiac stimulants in this type of case at this age. Such patients do not stand digitalis very well. The best thing to do is to give them 3 to 4 c.c. a day for three or four days, and then stop. They will not tolerate digitalis when they have arteriosclerosis or coronary disease.

There is another diuretic that was recently used in California; that is bismuth. Instead of mercury, they are using bismuth out there. If you give salyrgan your diuresis goes up very dramatically and then goes down very dramatically. With bismuth the diuresis goes up and stays up six or seven days. They use a sodium bismuth tartrate, the same drug you use for syphilis. Salyrgan is used for lues, and this bismuth preparation is also used for lues, but it produces a marked

diuretic effect in this type of case. Thus we have cardiac stimulants and mercurial and bismuth diuretics as means of reducing edema.

This patient was so ascitic that she was tapped, which is also of great value in reducing the pressure on the kidney. Let me repeat: this patient is of the cardiovascular insufficiency type. We base that on her urinary findings, on her age and on the history. Her rheumatism of the lower extremities may not have been a rheumatism at all. It may have been a static affair which occurs between the ages of fifty and sixty, and not inflammatory. It may have been inflammatory, but it was located only in the legs which makes me think it probably had something to do with her age.

The next patient is much more difficult. This patient is thirty years old. She had a baby six months ago, and since the birth of the child she has not felt very well. About six weeks ago she had an attack of influenza, with chill and fever. She remained in bed only one day. About four weeks later she developed an irritating cough which bothered her especially at night. She was unable to lie down at night because of a choking sensation and a tight feeling in her mid-sternal region. That is an interesting point. She would sit up most of the night and try to sleep on two pillows. Exertion also aggravated the cough. Accompanying the cough she complained of nausea and vomiting and was unable to take any medicine and very little food.

General weakness and extreme fatigue have been noticeable for the past six months, since the time of her confinement. Dyspnea has been pronounced on slight exertion for the past two weeks. Two days prior to this examination she had puffiness of the face and swelling of both legs, also very disturbing palpitation of her heart and pulsation of the vessels of the neck, which was noticed by her mother and other relatives. When questioned about her kidney, she said there had been a noticeable decrease in the amount of urinary output, and no nocturia.

About six months ago she had a normal delivery. She had not complained of headaches or disturbance of vision during that time, but she did not regain her strength after the delivery.

Six years ago she had inflammatory rheumatism, multiple joint infections from October to January, at which time a diagnosis of rheumatic endocarditis with mitral involvement was made. Following this her tonsils were removed. Following the tonsillectomy she enjoyed good health, but had an occasional sore throat. She also gives a history of a mild attack of rheumatism at the age of fourteen. The family history is negative.

Menstrual history. She began menstruating eight weeks after delivery. No abnormalities were noticed.

Physical examination. She has gained twenty-five pounds since the baby was born. The abdomen is bloated, and there is dullness in the flanks. Her present weight is 185 pounds. There is puffiness of the face, neck and eyelids. Her heart is enlarged somewhat to the left. Blood pressure is 186/120. In other words, we are dealing here with a hypertension of some kind. Whether it is essential or renal, is still to be decided. There is no perceptible liver enlargement. She is on a low protein diet. Her temperature and pulse are practically normal. The respiration is normal.

Here are her urinary findings: specific gravity of 1026 when she came in; a trace of albumin. She has secondary anemia. Her blood urea is normal; blood chemistry is normal. Her output of phthalein is 36 per cent. Mosenthal test showed concentration of 1010 to 1015, although on entrance it was 1026.

When was this Mosenthal test made? That is an important point if you want to make any judgment about specific gravity in the urine. The Mosenthal test was made on the first of May. During that time, however, this patient was putting out more urine than she was drinking water. In other words, she was having a diuresis. When you are having a diuresis, your specific gravities are not what they should be. Her specific gravity when she came in was 1026, but the Mosenthal test showed only 1010 to 1015. This test is of no value whatever at this time for judging what this patient can do, because she was having diuresis; she was losing edema.

Now, then, what have we got here? We have a woman with a normal blood chemistry. We have a woman with a history of rheumatic endocarditis, and we have a woman who has a blood pressure of 186/120, which is, by the way, coming down under rest in bed.

What is the answer? Are we dealing with a nephritis? Are we dealing with a patient who has an old mitral lesion, who is developing essential hypertension; or are we dealing with a patient who has had mitral disease, who has a little hypertension, and is developing nephritis? Those are the things we have to settle in this type of case.

The plates that we have here show an involvement of some kind. The cardiac outlines do not suggest any mitral disease. It is unfair to make a judgment about the cardiac outlines from a stereoscopic plate. One should have a teleoroentgenogram; that is, a plate that is at least six feet from the x-ray target. A six-foot plate would tell us something about this patient's heart.

Her heart is shaped something like this (indicating). If she had mitral disease when she was fourteen years old, and again six months ago, she should have a differently shaped heart, something like this (indicating), or what we call the mitral bulge. She does not have that. She has a suggestion of left-sided hypertrophy, due to the hypertension. In other words, she has a hypertensive type of heart. So that we can possibly throw out rheumatic fever as a part of the picture, as well as rheumatic endocarditis or valvular defect. We have a hypertension here, and we also have edema.

Now the question comes up, is this nephritis? The possibility that it is a mild type of nephritis cannot be entirely discarded. She may have a mild type of nephritis, but the whole picture can be explained again on a cardiovascular basis. There is no family history here of cardiovascular disease, but sometimes we cannot get that in histories. The whole thing can be explained on a cardiovascular basis.

This woman developed a hypertension of a rather abrupt type, and with this, cardiac insufficiency and edema, and with the edema she had what we thought was a nephritis. I question very much whether she has a nephritis. It is too early to say. If it is a nephritis, it is a very mild one, and I would not pay much attention to it. The treatment would consist entirely of rest in bed and cardiac stimulants.

Why am I so insistent about not calling these cases nephritis? Nephritis is a disease which, by its inflammatory reactions on the glomeruli, diminishes the filtrations of the kidney. It has been worked out that as a rule the adult kidney has about 1,000,000 glomeruli, and the filtration surface of these glomeruli in each kidney is about nine square feet. That explains why we can take out one kidney and still have tremendous kidney function, but if we cut down the other nine square feet we get reduced function, and with reduced function certain things happen in the urine, which any practitioner can determine; that is, there is lack of dilution and lack of concentration in the urine. If you give a patient in whom you suspect decreased renal sufficiency 1,000 c.c. of water in an hour's time and watch his urinary output, if he is a normal patient, he will put out 1,000 c.c., and maybe 1,500 c.c. in four hours, and his specific gravity will go down to 1, 2, 3 and 4. That is called the dilution test. If you give him a period of dry diet and watch his urine, his specific gravity will go up to 1030-1035, or at least 1025-1030, whereas the diseased kidney cannot do that. That is the easiest and most comfortable test that we have for urinary function. That has been

checked up by the finer methods. We have been using Rehberg's filtration test to check up this concentration and dilution test, and they correlate very well. It has been worked out that the kidney filters 600 to 900 c.c. of urine a minute, and that is something like 144 liters of fluid through the kidney daily. The diffusion back through the tubules, however, of 99 per cent, gives us a urinary output of about 1440 c.c., which is practically normal.

Why a diseased kidney cannot put out the quantity of water that a normal kidney can, we do not know, but we do know why it cannot concentrate. It cannot concentrate because of the variations in size and condition of the tubules. All of this is based, of course, on the assumption that the kidney is nothing but a filter, and that the glomeruli filters everything that is to be excreted, at what we call the ultra-filtration ratio, the maximum amount, no matter whether the kidney is diseased or not.

Then the back diffusion is entirely controlled by the tubules. In the case of dilution, where the normal man puts out 1,000 c.c. or 1,500 after taking 1,000 c.c. of fluid, a diseased kidney will put out 50, 60 or 100 c.c. in four hours, the maximum being about 400. The area of filtration has been destroyed so that it cannot filter in the same ratio of time that a normal kidney can, but it will put out in twenty-four hours as much as a normal kidney and more. That is what we call obligatory polyuria. In our degenerative kidney diseases that is why we have nocturia. The time when patients put out their urine is when they are resting, when their circulation is improved by posture and so on.

In all our studies of this type of problem, one has to consider circulatory phases which have to do possibly with degenerative processes, and the inflammatory phases, which give us a clear-cut picture of diminished function.

There are many people who give a history of nephritis, oliguria, casts, albumin, and all those things. As you will note, this patient has no cast in her urine; she has no red blood cells. To make a diagnosis of nephritis, one should have casts and red blood cells and leukocytes in the urine. Neither of these patients has these two factors, so that we have to get away from the inflammatory aspect here and think of the vascular aspect.

Second Day

The first patient I have to show you is a little girl about eight years old who last Fall had an acute attack of rheumatic fever. She illustrates a few things about rheumatic infection which are of interest to us as practitioners and shows how far-reaching this disease may be in our body.

This child started with an acute abdominal pain. Her appendix was removed. A day or two later they found a friction rub in her heart, and with this friction rub there was a beautiful blossoming out of her joints. In other words, this case illustrates that rheumatic fever is not a disease localized in the joints and heart; it may attack practically any tissue in the body. They are finding rheumatic changes everywhere, particularly in the lungs and also in the viscera, so that we have visceral manifestations, pleural and pneumonic manifestations of rheumatic fever, as well as joint and cardiac manifestations.

This little girl, on examination today, shows an enlarged heart to the left. At the acute stage she evidently had pancarditis, because she had fluid in her pericardium, friction rub, and also valvular noises. At the present time the residue that is here in this child is a mitral heart, with a suspicion of adherent pericardium. Why do I say that? Because in the pure mitral heart we do not get any enlargement to the left. This child has enlargement to the left. She also has enlargement to the right. We get enlargement to the left, of course, if we have aortic involvement. This child has no aortic insufficiency. So with an enlargement to the left, and with mitral noises, one can safely assume that the enlargement of this heart is due to some adhesions, and the diagnosis of adherent pericardium is a fair assumption.

In looking her over for various retractive phenomena on the chest, I was unable to see any except on the front. There is that wavy retraction at each heart beat.

Now the question comes up, what can we do for this child? She has been under rest and graduated exercises, is improving steadily, and, as far as I can see, the prospect of greater improvement is still present.

There are cases of this sort that go on to various stages of improvement and then drop back, and improve, and drop back. Usually death occurs in anywhere from a year to ten years. The usual cause for that type of phenomenon is an adherent pericardium. The adherent pericardium embarrasses the heart so that it gradually enlarges and distorts, then gradually decompensates, improves, and decompensates again until death occurs from cardiac failure.

The therapeutic suggestion that I hold out for this type of cases is that we do a Brauer's operation when it is indicated. In selective cases Brauer's operation is a splendid thing for relief of such a type of heart. The operation consists of the removal of the third, fourth and fifth anterior ribs over the precordium. This gives the heart more room in the chest. It also permits greater freedom

of the heart. Some of these patients who have been bedridden for years often become, if not economically useful, at least useful to themselves. They can get around and be up and about and enjoy living. That operation should be done after gradual study and selection of the case.

The only type of adhesions which this type of operation relieves are the ones on the anterior chest. In those on the posterior mediastinum, it is of no value whatever.

Cardiolysis has been tried for this type. It is a very severe and far-reaching operation. I have had no experience with cardiolysis. We have had experience with Brauer's operation in five cases, four of which have been very satisfactory.

Now a word about mitral disease in adults. That is a phase of mitral disease that is not quite clear, I think, in the minds of most of the men. Rheumatism as a disease or infection is not a killing disease; it is a crippling disease. Thayer was able to collect only thirty cases in thirty years of death from acute rheumatic fever, showing that it is not a serious disease as a killer.

If we get what we call the unhealed valve type the patients will live up to the fourth decade. In subacute bacterial endocarditis they die in the third decade, whereas patients with chronic rheumatic healed valves live until the fifth decade. Thus we have a certain sprinkling of people with crippled heart valves who are in the population and which belong to what we call the mitral type of heart case, as distinguished from the syphilitic heart and the subacute endocarditis heart.

These people, when they get to be about thirty-five or forty, manifest certain types of clinical symptoms. The most common is one which the heart produces itself and that is fibrillation as a complication of mitral disease. That is so common and its therapy so well organized that we will not discuss that type of complication.

The next type of complication we find in these mitral types of hearts is hypertension. One out of every five patients with mitral hearts live into the fifth decade. Of these one out of two develop hypertension. Hypertension is quite a complication. It produces a new load on the heart, and we have the new problem of increased work of a defective and deformed heart. Levine of Boston thinks that hypertension is a salutary thing with these people. Owing to the hypertension we get an increased size of the left ventricle, a widening of these mitral deformities, and the patient has a better chance to adjust his balance between the right and left ventricle. Theoretically that sounds true. He thinks that it increases the life of these people. Personally, I think differently. I think any load on a mitral heart is not a salutary

process; it is just the opposite. That has been our experience.

These patients with mitral hearts with hypertension are not specifically hypertensive because they have mitral hearts; they are hypertensive because they happen to live that long. We have noticed that a certain percentage of people in the population develop hypertension, essential hypertension, as we call it, and a certain percentage with mitral hearts are in that group. They develop hypertension not as the result of their heart lesion, but just because they happen to live that long.

Another type of complication of mitral disease in adults which is of great interest to me is the type that develops hyperthyroidism. That, again, is not associated with the heart lesion but is associated with the period of life the patient is in. It has been very confusing and very difficult sometimes when we find a mitral heart with tachycardia and fibrillation, and the patient does not improve under the usual therapy, rest and digitalis. These people will not improve under rest and digitalis. There is something holding back the improvement that usually occurs under such management. One has to think of hyperthyroidism always when a mitral type of heart in an adult does not respond to therapy. There is something wrong. The usual thing that is wrong in that instance is a mild type of hyperthyroidism, usually due to a toxic adenoma. If you examine your thyroids carefully by palpation you will pick up the nodule.

An easy way to find out whether you are dealing with that type of case is simply to give the patient some Lugol's solution. If the heart quiets down under Lugol's, you have come to the proper judgment in that particular instance.

I feel that even though Lugol's does not improve the patient, but you are sure there is a nodule in the thyroid, you are justified in removing the adenomatous portion of the thyroid.

This type of complication does not manifest the usual laboratory signs of hyperthyroidism. It does not show increased basal rates, or, if it does, you are not sure that the basal rate is not due to the dyspnea which may be present. Your judgment, from the laboratory standpoint of the diagnosis of hyperthyroidism, is therefore fallacious. You have to depend on your clinical data and your clinical experience in that particular instance to come to the conclusion as to whether you are dealing with hyperthyroidism. Occasionally one of these people has myxedema, with the same type of symptoms, but it is not so common as the hyperthyroid type.

The last group of patients in this adult type have a complication of which I spoke yesterday.

They are more cyanotic, they are more dyspneic for the clinical signs they show. When you get that type of patient then you must think that possibly in this particular instance you are dealing with pulmonary arteriosclerosis, secondary to the mitral disease. That is more common than we realize and should be kept in mind in a certain percentage of your adult mitrals where therapy is not doing you any good. These people gradually go on to decompensation, no matter what you do, and die of cardiac failure.

Twenty-seven per cent of all the collected cases of pulmonary arteriosclerosis, where the diagnosis has been made postmortem, have been in mitral types of hearts. That does not mean that twenty-seven per cent of all mitral hearts have pulmonary arteriosclerosis. Twenty-seven per cent of all pulmonary arteriosclerosis patients have mitral hearts. Probably you will meet one in one hundred.

Thus in adult mitral disease one has four types of complications to meet with. There may be others, but these are the most striking ones; auricular fibrillation, hypertension, hyperthyroidism, and pulmonary arteriosclerosis.

This man is shown because of splenomegalia and ascites, and the diagnosis is cirrhosis of the liver. There is nothing particularly remarkable about the case except that his general well being is so well preserved. He is as happy as a lark, eats ravenously, wants his usual quota and all the rest that goes with an active person.

This man is forty-nine years old. He was born in Lithuania. He came over to this country twenty years ago. He is a packing house employee. There is nothing of any importance in the family history. He says he has never been sick in all his life. He worked steadily until four months ago, when he quit work on account of an ulcer on his leg. His weight up to four months ago was 207 pounds. His habits were fine, with the exception of taking a pint of liquor daily, with a lot of beer, except Sundays and holidays when he took as much as a quart or a quart and a half of liquor and a lot of beer. He denies venereal disease. He does not smoke, but he chews; he used to chew a great deal.

Physical examination is essentially negative as far as the heart and lungs are concerned, with the exception of a greatly distended abdomen, varicocities of the leg, and dark pigmentation of both legs and feet, some caries and pyorrhea about his teeth.

There are absolutely no subjective complaints. He does not complain of anything. He said that if it was not for his ulcer he would go to work. There is no jaundice. The pupils react to light and accommodation. Blood pressure is 120 systolic and 75 diastolic. Radial and brachial ar-

teries show some evidence of sclerosis. He has been tapped, since January 23, on the average of once a week. The first tapping yielded three gallons of fluid, and the subsequent tapplings yielded a gallon and one-half to one gallon. Digital examination of the rectum reveals only a mild case of hemorrhoids.

On the laboratory side, the urine is low. The blood shows 66 hemoglobin, 3,000,000 whites and 550,000 reds, 6,800 leukocytes, 8 per cent lymphocytes, 1 per cent eosinophils. The blood Wassermann is negative. He shows blood sugar, 66 milligrams; blood urea nitrogen, 29 milligrams.

This patient is practically negative in all details except the ascites and his portal obstruction. He gives a definite history of alcoholism. Of course that brings up the perennial question, is alcohol the specific cause of cirrhosis? We have had a man working on cirrhosis of the liver for about ten years, and he thinks the association is there. He does not say the cause is there.

We do not distinguish between biliary and portal cirrhosis in an anatomic or clinical sense any longer. All cases produce practically the same type of picture. This man is of no striking interest except that he has a beautiful collateral circulation on his abdominal wall. He is having collateral circulation through the azygos veins and the superficial veins of the upper abdomen. He has a caput medusae. In all the textbooks they speak of the caput medusae, but I do not think I have seen it more than twice in my life. The most common collateral circulation, of course, is around the esophagus. That is the great danger point with these people.

I have seen operations for ulcer of the stomach on cirrhosis of the liver cases because of the hemorrhage and suspected ulcer. No ulcer was there, of course; it was due to varices. One has to be a little careful and always think that in hemorrhage of the stomach there may be some portal problem involved.

This patient came to the doctor for his varicose ulcer and pigmentation on both legs. This pigmentation is practically due to the vascular changes in his legs. Chronic passive congestion of the skin has produced pigmentation. That is the only problem on that part of his body.

He has begun using salyrgan, which is practically the ideal way of treating this type of ascites. Sodium nitrate, six to eight grams a day, or less if the patient can not stand that type of dose, plus salyrgan at intervals, keeps such a patient comfortable as far as intra-abdominal pressure is concerned. Tapping him from time to time may be of necessity but should be done only when obligatory, because frequent tapping eventually produces

chronic peritonitis, which simply embarrasses the circulation still more.

I think the surgeons are stepping away from the Talma-Morison operation in these cases. They are avoiding it as much as possible. There was a time when they claimed great results from this type of induced collateral circulation. At the present time their attitude is changing, and they are not operating on this type of case any longer.

These people live fairly comfortably, just as this man is doing, for a considerable number of years, but when hepatic insufficiency begins, which is characterized by jaundice, then their days of discomfort begin. It is a question of time when hepatic insufficiency or some kind of intercurrent infection occurs which takes care of this type of patient.

Those of you who want to see a nice collateral circulation on the abdominal wall ought to look at this man behind the screen.

I have not had much time to look at the next patient, but he has a beautifully enlarged spleen, an enormously enlarged spleen. This spleen extends down below the umbilicus; it is hard and does not pulsate, and it takes up considerable abdominal room.

His history is that he has had this spleen for fifteen years. He came to see the doctor about the swelling of his great toes and feet. Fifteen years ago he had smallpox, and at that time his spleen was enlarged. He never had any treatments for his spleen, but recently one or both great toes began to trouble him, became swollen and tender, and sometimes the condition extended up to the ankle. These attacks are one to three months apart. They have been diagnosed as gout, rheumatism, and so forth.

In March, a year ago, he had an attack of acute indigestion. He has a good appetite, sleeps well, and has lost no weight. He denies venereal infection; no malaria. He has never lived in the south. His mother died of tuberculosis.

Hemoglobin is 62 per cent; red blood count 3,900,000; white blood count 28,000; neutrophils 75 per cent; lymphocytes 19 per cent. The others are of no particular significance. There is a vague trace of albumin in the urine. The specific gravity is low. There are occasional pus cells, and so on. In other words, we have here a man with chronic splenomegalia of unknown origin.

I have asked Dr. Downey to look at the blood smear of this man to see what it was like, and if he will tell us what he saw at that time, I will be much obliged to him.

Dr. Downey: The blood shows an extremely toxic picture. The neutrophil leukocytosis is quite

obvious on the smear. We see a very marked shift to the left, very many of the so-called band forms of Schilling.

I imagine there are some myelocytes, probably not many. Of course, the first thing you think of in a blood picture of that sort is infection of some kind, although there are other things, of course, malignancies and things of that sort, which might give a similar blood picture. At any rate, as far as the blood is concerned, the case does not seem to fit into any of those splenomegalies we were discussing yesterday afternoon, such as Banti's. It might be a Banti with something in addition, but the Banti spleen alone would not give that blood picture. We expect, if anything, a relative lymphocytosis and leukopenia in Banti, whereas here we have a hyperneutrophil leukocytosis, with great suppression of the lymphocytes, and we have very toxic neutrophils which we do not get in Banti, at least in the uncomplicated cases I have seen.

Of course, Gaucher and hemolytic jaundice do not have that kind of blood picture. If I knew nothing about the case but simply saw the blood picture, I would say that is probably a chronic infection of some sort. That is about all I can say about it.

Dr. Ulrich: In our discussion yesterday of splenectomies, I made the point that whenever a spleen got to be this size and the patient's condition warranted, it would be perfectly legitimate for you to take it out. This person may have Banti's disease. I have never seen a Banti with a spleen that large. You may have some condition that you are not able to diagnose at the present moment, such as Gaucher's disease.

Is there anything particular about the blood picture in Gaucher's? Can you tell us anything?

Dr. Downey: There is nothing specific. It is just secondary anemia.

Dr. Ulrich: Banti's disease was ruled out. You have to have secondary anemia. This boy is toxic. Leukopenia is the particular type of leukocyte picture in Banti's disease, but he has something else; he has something in his toes. I should think an x-ray plate of the toes would tell us whether he has gout or not. Possibly blood tests for uric acid might give us some hint about his particular joint symptoms. We have no data on that point.

With regard to his spleen; it is impossible to make a diagnosis as to what type of spleen it is; it is just a case of splenomegalia. It is a marvelous spleen, such as you see only in myelogenous leukemia. I have seen enlarged spleens in Hodgkin's disease, but after fifteen years one ought to get some nodes somewhere else in Hodgkin's disease. This man has no nodes anywhere. He has an en-

larged liver. It may be that we are dealing here with one type of Banti's, which I called the cirrhosis of the liver type, with most manifestations in the spleen.

However, at this time this boy ought to be having some jaundice. I cannot tell whether he has jaundice or not, the light here is too poor. That could be determined by the bilirubin index or the biliary index.

My own conviction in the approach to this man's problem would be that he should have a splenectomy done, not on the strength of our present data, but on the general impression and the general principle that this spleen has interfered with his comfort. It is a nuisance. As a nuisance it should be removed. He has excellent regenerative faculties in his bone marrow, according to the blood picture. He has some nuclear reds, so there is no aplasia of the bone marrow. That is another indication that was brought out yesterday for splenectomy.

TREATMENT OF FISSURE IN ANO

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Every fissure should be dealt with promptly and thoroughly, not only for immediate relief from suffering, but to avoid the possibility of septic infection spreading to the perirectal fossa and thus originating a perirectal abscess or fistula. Therefore even if the fissure is due to some constitutional disease, local as well as general treatment is required, but the underlying syphilis, tuberculosis, polypus, hemorrhoid or proctitis will demand its own attention. In the case of infants and children only mildly astringent and soothing applications can be made.

Two general principles govern the treatment of fissure: (1) rest; (2) drainage.

Opiates and sedatives are interdicted, since they increase constipation and thereby increase the trauma and pain. Constipation must be relieved and the stools kept mushy or soluble.

PALLIATIVE TREATMENT

Laxatives should be used very guardedly. Salines produce very irritating liquid stools and resinous cathartics, like podophyllin and aloes, are also objectionable because of their effect on the colon. The old-fashioned remedy of sulphur and cream of tartar or the more modern remedy of phenolphthalein may serve well in selected cases. Before each defecation the patient should take an enema of an ounce of olive oil or glycerin, using a soft rubber ear syringe, to soften the fecal mass and assist in its easy evacuation.

Following defecation and also night and morning, the patient should sit in a hot sitz-bath, and

cleanse the anus with cotton swabs that any irritating substance in the fissure may be washed out. The parts should then be dried, and a mild dusting powder and a piece of gauze placed between the buttocks that any secretion may be absorbed. A short rest may be necessary following the defecation to relieve the patient from exhaustive suffering but usually he will be able to attend to business until the next bowel movement.

The diet must be arranged so as to exclude articles that leave much residue or produce hard, packed stools.

Some very recent cases without apparent deep infection are too painful for the above mentioned manipulations but respond to the deep injection of a local anesthetic which relaxes the sphincter for several days. The greatest single factor in preventing spontaneous healing of an anal fissure is this sphincter tenesmus. Therefore, our treatment must include relaxing this muscle sufficiently long to allow the lesion to heal. The injection of anesthetics was suggested by Dr. Graham several years ago.

No preparation on the part of the patient is needed. The circumanal skin is sterilized and ten to fifteen drops of a 5 per cent solution of quinin and urea hydrochloride is injected directly into the sphincter muscle under the fissure. The point for injection is just below the proximal end of the fissure. Rather severe pain is experienced by the patient for a few seconds but anesthesia is complete by the time the injection is finished. The whole procedure should not consume over thirty seconds.

At the meeting of the American Proctologic Society in 1927, Dr. Graham reported 128 cases treated by this method with immediate and complete relief in ninety-eight. Twelve patients reported a return of symptoms in from six weeks to three months following the treatment. A second treatment was given to these patients, with the result that a cure was effected in eight. This method is devoid of all danger if properly used. Extreme care must be taken not to inject the strong solution into the skin, as a slough would surely result. The anesthetic effect is so pronounced and so prolonged that no anodynes are needed and the patient resumes his occupation at once. The sphincter stays relaxed for a sufficient period to allow the fissure to heal.

Recent Fissures. Before the wound edges are thickened or undermined and before pus burrowing has occurred, recent fissures can generally be cured without having to resort to operation, but a good deal depends upon the patient and upon the severity of the symptoms.

The first thing to do is to make sure that the bowels act easily with a soft stool by giving Chimalin, grains 10, or mineral oil, one-half ounce, after each meal. After each bowel movement the patient should sit in a hot sitz-bath for fifteen minutes and carefully but thoroughly wash the parts with soap.

Because of the favorable results obtained in recent years by the use of soaps and soap solutions as antiseptics, Renaud¹ conducted a series of experiments to determine their value. Using solutions of sodium oleate, he sometimes washed ulcerated surfaces with a 2 per cent solution, sometimes covered them with compresses of the same solution and sometimes covered the tissues with a soft ointment, obtained by the addition of electrolytes to concentrated solutions. The results were excellent. Not only did the solution have a marked curative effect on necrotic and fetid tissues, but true cicatrization was often observed. Especially noteworthy results were observed in the treatment of ulcerations of the genitalia. The author is convinced, therefore, that, because of their extreme fluidity, which permits them to reach and collect all the finest particles, and because of their harmless effect on the tissues, soap solutions are destined to become the most efficacious of antiseptics. After this cleansing, if the pain still continues, the patient should lie prone and apply the following sedative:

R: Calomeldr. 4
Ext. Stramoniigr. 3
Ung. Hydrastaloz. 1

This should be applied with a cotton swab before and after each bowel movement and before retiring at night. A patient with an acute fissure should not walk about much, but keep as quiet as possible until it has healed.

Each day, at the office, the patient is placed in the left lateral prone position, a conical fenestrated speculum is carefully inserted with the shutter over the fissure, the shutter is withdrawn and the speculum adjusted to bring the fissure well into view. Any particles of foreign matter, feces and thin gray or yellowish secretion so often covering the ulcer must be gently removed with swabs dipped in warm normal salt solution. The surface is then carefully dried and lightly painted with equal parts of balsam of Peru and castor oil. Sometimes this occasions a spasm of the sphincter for a time after the treatment, but this may be avoided by smearing the field promptly with stramonium and hydrastal ointment before the patient leaves the table.

A cure should be accomplished by this course in two or three weeks. After the pain is relieved,

the patient should be watched to make sure that the fissure has really healed. If relief is not obtained within this time the fissure should be treated surgically.

OPERATIVE TREATMENT

Cauterization. When the pain is acute and the parts are exceedingly tender, it may be impossible to make the soothing applications mentioned above and therefore palliative treatment cannot be effective.

With gentleness and persistence the nates can be separated carefully and slowly until the fissure is exposed. In women a finger can be introduced into the vagina and the rectum above the external sphincter pushed down until enough everts through the anus to expose the fissure. A small swab of 4 per cent cocain is applied to the ulcer and the swab held in place while the parts are released and left in repose. This manipulation occasions some discomfort and ten or fifteen minutes are necessary to develop full anesthesia. Having assured ourselves, by gentle probing, that the entire ulcer and its walls are anesthetized, a cotton-tipped probe, tightly twisted, is dipped into pure phenol, liquified by heat, and the acid permitted to crystallize on the cotton. The entire floor and sides are thoroughly cauterized until the whole surface turns white, being careful that the acid does not touch any surface that it is not intended to cauterize. A similar tipped probe is now dipped into dilute alcohol, and the outer edges of the fissure are swabbed off. This limits the phenol to the parts to which it is applied.

Excision. When the sphincters are hypertrophied, the wound edges swollen, or the sentinel pile present, nothing short of surgical removal of the ulcer and its associated pathology will be successful. Depending upon the temperament of the patient, a local or general anesthetic may be preferred. The majority of our cases are handled under infiltration anesthesia, those with spastic sphincters under sacral block, and only a few under gas anesthesia. After our patient is properly prepared the fissure is grasped at its upper extremity with a toothed forceps. Longitudinal incisions beginning above the fissure are made on either side of it, each incision slanting inward until it meets its fellow beneath the ulcer, making a V-shaped wound, the two incisions uniting again externally below the fissure. At its upper limit the incision is superficial and involves only the mucous membrane, but at the lower border or skin terminus the incisions are a half-inch in width and carried to nearly an equal depth. By this technic the base of the fissure is removed deep enough to expose the muscle wall and the outer end of the

wound extends well out onto the skin to facilitate drainage.

The sentinel pile, if present, is included in the parts cut away, and also any papillae or small polypoid growths at the upper end of the fissure, which might fall into the rent and hold the wound apart.

A small branch of the inferior hemorrhoidal vein is frequently divided during the excision, but it is seldom necessary to ligate it. Firm pressure with a hot compress soon checks the hemorrhage.

Sinuses burrowing under the mucous membrane exist in many cases of fissure and must be sought for with a probe. Every slight variation from the usual appearance of the base or edges of the wound must be carefully explored with the probe. Sometimes the sinuses are quite superficial and at other times they are found in the floor of the ulcer. Later, as healing progresses, any sluggish patches must be carefully explored and a sinus will usually be found leading from them. Whenever these channels are found they are incised their whole length. Swollen or inflamed anal folds coexisting with the fissure should be incised and probed, and if a channel is found it should be widely opened at once.

Unless all of these tumors and sinuses, and all redundant skin from about the fissure, are properly removed, the operation will not result in a cure.

Some surgeons recommend dividing the anal sphincter, but this, we feel, is a mistake, as there is no necessity for such a procedure and doing so may easily result in serious damage.

In cases of long standing where the sphincter is hypertrophied it will need divulsion by a careful and thorough kneading. With one or more fingers gently introduced, the entire circumference of the bowel may be massaged until the sphincters finally will be quite soft and pliable and all adhesions will be broken up. If a general anesthetic is administered I prefer nitrous oxid gas and oxygen. Under this anesthetic there is not the muscular relaxation of ether or chloroform anesthesia, so that the operator is better able to determine the force and time required to dilate the sphincters satisfactorily.

Technic of Dilatation. Divulsion of the sphincters, literally interpreted, means to "tear or rend asunder"—and that is what usually occurs when the patient is chloroformed and the muscles are stretched by thrusting the thumbs through the anal sphincter and dragging them sideways until they touch the ischiac tuberosities. Such brutal traumatism, however, is unnecessary. What we

wish to accomplish is simply to overcome the exaggerated contractility of the sphincter.

One index finger or a thumb is introduced through the anus and slowly but firmly rolled around and around, thus massaging the irritated fibers until they soften. Two fingers are then introduced and the procedure further continued until the whole sphincter muscle is flabby and pulp-like. This requires, perhaps, ten minutes' treatment, but should not be hurried. Sometimes very gentle manipulation will suffice, and sometimes firm pressure is needed. The mucous membrane must not be torn nor any bleeding produced, although extravasation of blood into the cellular tissues about the anus may occur.

Dilatation should never be carried to the degree of divulsion which threatens paralysis, but only sufficiently to break up the adhesions that have formed about and beneath the ulcer and to re-establish free circulation in the tissues, restoring normal elasticity and expansibility and preventing the constant or spasmodic contractions. During the dilatation the sphincter muscle should be thoroughly massaged and manipulated between the fingers.

When but a moderate degree of dilatation is required it may be performed under local anesthesia after careful preparation. Not all patients are of suitable temperament for such manipulation, however, and a general anesthesia is often required.

In the case of children this same plan is carried out in a little different manner. The nurse dilates the sphincter by putting a rubber finger cot on her little finger and after anointing it well with the soothing ointment above mentioned, carefully inserts it into the bowel, going up a little higher each day. If the pain is too severe the fissure should be touched with cocain solution. Following this treatment the soothing ointment should be applied about the fissure externally.

AFTER-TREATMENT

The whole wound is now well anointed with heavy petrolatum and the wound packed with paraffined gauze laid in narrow layers. A light anal dressing with perineal support concludes the dressings. Each day the gauze packing is removed. This removal is painless in contrast to a dry gauze packing which becomes filled with granulations and blood clots. As the gauze is removed the wound is flushed well with saline solution or water and these flushings are repeated once each day and also following each bowel movement, until the field is completely healed, which requires about three weeks. During these dressings the edges must be separated carefully, the attendant

pulling the buttocks apart while narrow strips of vaselined gauze are placed between the wound edges. The whole wound is exposed at each dressing and regeneration develops from the base. Particular attention must be given to the upper limit of the wound and also the lower outlet, that perfect drainage may be provided.

The patient should not be allowed to be about until the wound has completely healed, and care should be taken to keep the stools free for a considerable time thereafter. By this procedure the cure is absolute and the relief from pain is practically immediate. There is some burning pain from the cut wound, but it is trivial in comparison to that due to the fissure, and it soon passes away. It is advisable, although not necessary, that the patient stay in bed for a day or two after the operation. His bowels are easily confined for two or three days by keeping him on a liquid and absorbable diet.

On the evening before the bowels are to be emptied the first time he is given a level teaspoonful of compound licorice powder and early the next morning he is given, through a soft rubber catheter, an enema of eight ounces of soapsuds or mineral oil.

The evacuations are thereafter kept free and the movements soft, and after each defecation the patient should take a warm antiseptic sitz-bath. There may be a temporary incontinence following this operation, but this disappears as the wound heals. When the fissure has existed continuously for several months, or when it has been operated upon and has not healed promptly, the possibility of syphilis will call for a blood examination, and also tuberculous, anemic or rheumatic factors must not be overlooked.

Irritable ulcer at the anus associated with catarrhal inflammation within the rectum is obviously not amenable to operation but demands treatment of the underlying cause. Local irrigations of 20 per cent solution of *Krameria* will give much relief in these cases by relieving the irritating mucous discharge.

There are many factors besides the ulcer itself that require attention at the operation and during the after-treatment. There has been a long train of local disease leading up to the development of the fissure and these factors must be remedied. The patient is very apt to neglect himself as soon as his painful symptoms are relieved but the physician must impress upon him the serious nature of the disease and the importance of the continued treatment for the required length of time.

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HEART SOUNDS AND THEIR CLINICAL SIGNIFICANCE

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In the past two or three decades great advances have been made in our knowledge of cardiovascular diseases. These advances have in the main been dependent upon one great innovation of which Sir James Mackenzie was the leader. Mackenzie emphasized the importance of the myocardium in heart disease. Today to a very large extent our knowledge of the nature, the causation, and the treatment of cardiac lesions depends upon this important principle. Hence, in our study of cardiac lesions we must always, first and last, bear in mind the importance of the myocardium.

Today, with the various mechanical devices for the study of cardiac lesions, we are apt to neglect the clinical study. The polygraph, the electrocardiograph and the Roentgen ray have been of great assistance in increasing our knowledge in cardiology. Before the advent of the polygraph, and more especially, of the electrocardiograph, we had little accurate knowledge of the irregularities of the heart. At present these arrhythmias can practically all be diagnosed at the bedside with the possible exception at times of auricular flutter.

Our attention is now turned to a study of myocardial lesions. Numerous important contributions have already been made and we can expect that in the coming few years many more will be added. I believe these will not only come through the electrocardiograph alone but by the simultaneous use of the phonocardiogram and the electrocardiograph. We must not, however, sit back and fail to develop our clinical sense by relying on these mechanical devices. Is it not even possible for us to increase our clinical knowledge and sense to the degree that we can diagnose myocardial lesions at the bedside, as we now do the arrhythmias?

I wish to emphasize the importance of some statements made recently by Dr. James B. Herrick, in his article in defense of the stethoscope. There is a tendency today to discredit the importance of the stethoscope as a diagnostic aid. As a result, many physicians are neglecting this instrument and making insufficient attempt to train themselves in its use. Thereby, we fail to appreciate and evaluate some of the important physical signs such as I wish to discuss in this paper. Our mechanical devices, all-important as we must admit they are, can not completely displace the use of the stethoscope. With this in mind, I wish to discuss one of the cardiac elements, viz: heart sounds and their clinical significance.

It is my impression that heart sounds are

greatly and in many instances entirely neglected in the study of a cardiac lesion. The older physicians were taught to give more attention to heart tones than are the younger men. In trying to recall my instruction in cardiology there is little that I remember about heart sounds. In fact, very little was ever said to us regarding them. We were told of the various types of heart murmurs and what they indicated or with which cardiac lesions they were associated. I believe it is often easier to detect variations in the character of heart sounds than to detect certain heart murmurs, and their significance or indication is just as specific as in the case of murmurs.

Normally with each cardiac contraction, three sounds are produced. In a paper of this kind there is little need for any detailed discussion of the third heart sound. Suffice it to say, that, when this third heart sound is audible, it is best heard either at the cardiac apex, the lower end of the sternum, or between these two points.

The first and second heart sounds are produced principally by the vibrations of the valve cusps, the closure of the valves, and the contraction of the walls of the heart chambers themselves. Thus far it has not been determined what part each one of these factors plays in the production of these sounds.

The first heart sound consists of three elements. The first and perhaps the most important of these is the valvular element, the sound produced by the closure of the mitral and tricuspid valves. This is thought to constitute the first and main part of the sound. The second element is muscular and is due to the vibration of the walls of the heart chambers and the contraction of the heart itself. Just how this muscle sound is produced, we do not know. The third element is the sound produced by the contracting auricles but the origin of this is even more uncertain. We do know that the contracting auricles produce a sound of their own, as is well shown in cases of complete dissociation of auricles and ventricles. This will be discussed later.

The second sound is produced by a single element, the valvular, due to the closure of the aortic and pulmonic valves.

In order that we may appreciate the clinical significance of heart sounds, we must first study their normal characteristics. Normally the first sound is of longer duration than the second. To illustrate this let us take a case where the heart rate is 75 per minute. Here the duration of the first sound is about 0.10 second while that of the second sound is about 0.08 second. The interval between the first and second sounds varies with the heart rate. Obviously, the slower the heart

rate, the longer will the diastole be, but the systole also lengthens. Hence, the more marked the bradycardia, the longer will be the interval between the first and second heart sounds. On the other hand, the more marked the tachycardia, the shorter this interval becomes, but the diastole is always more shortened than is the systole. Clinically, we find that this time relationship changes in such conditions as high grades of heart block, during exercise and excitement, hyperpyrexia, and toxic conditions.

We must learn to recognize the normal intensity of the first and second sounds before we can detect variations from the normal. The first sound is normally about 50 per cent louder than the second and is best heard at the apex of the heart. The second sound is best heard at the base of the heart. In this location, it is either equal or louder than the first sound. In young individuals the second sound over the pulmonic area is usually louder than the second sound over the aortic area. In middle life, the aortic second and the pulmonic second sounds are about equal. In old age the aortic second sound is usually louder than the pulmonic second. We can then say that normally, the sounds at the apex are as follows: the first sound is long, more or less loud and low pitched, while the second sound is shorter, less loud and higher pitched. After we have become familiar with this relationship, we can study the changes that are produced in the character of these sounds.

The variations in the character of the first sound can be classified as the physiologic and the pathologic. The physiologic changes are found in such conditions as excitement and during exercise. It is in the pathologic variations that we are here interested.

An increase in the metabolic rate, which will also produce an increased circulatory rate, will change the character of the first sound at the apex. An excellent example of this is thyroid toxicity. Here the first sound becomes increased in intensity, shortened in duration and higher pitched. We often take cognizance of the change in intensity and forget the change in duration and pitch. The degree of variation may be dependent upon the degree of toxicity, perhaps also in part upon the duration of the toxicity. This very important clinical finding is still unrecognized by a large number of physicians. Its importance is at once evident and often a toxic goiter is first suggested to us by this change in the character of the first sound at the apex. This is especially true when there is little thyroid enlargement or in cases where the thyroid is substernal. The degree of toxicity can also be estimated to a certain extent, but this

requires considerable study and experience. It is interesting to follow the change in the first sound after such a patient has been placed on Lugol's solution or has had a thyroidectomy. In some cases, the first sound becomes normal after a day or two; in others, it requires several days or even weeks and months. Persistent toxicity can be detected by this study of the first heart sound.

The character of the first sound is often changed in mitral stenosis. If we are examining a patient with or without a definite history of rheumatic fever, for evidence of a cardiac lesion, and find the first sound increased in intensity, this itself, if other causes have been ruled out, almost warrants a diagnosis of mitral stenosis. Accentuation of the first sound will at times be a factor in favor of mitral stenosis when it is difficult to distinguish an aortic from a mitral diastolic murmur. If we have a rheumatic aortic regurgitation and no mitral diastolic murmur, but do have an accentuated first sound, we are also justified in diagnosing mitral stenosis.

In the case of ventricular tachycardia, which at times develops in cases of acute coronary occlusion, the intensity of the first sound varies and constitutes one of the important points in the diagnosis of this disturbance. The character of the first sound is said to change in patients with marked anemia. I have not observed this sufficiently to be certain, but it is said that it may become as marked here as in cases of thyroid toxicity. In the latter condition, the appearance of the patient and the blood picture will differentiate the diagnosis. Fevers likewise produce a change. The degree of fever will aid in the diagnosis and if necessary a metabolic reading may be made.

Having considered conditions that increase the intensity of the first sound, let us now see in what conditions the intensity is decreased. This is most often observed under conditions of physical and mental rest. It may be found in obese individuals, in persons with a heavy chest musculature, and in patients with large breasts. Before we consider a decrease to be pathologic, these conditions must be considered. It is found in diseases of the lungs, such as emphysema; in diseases of the pleura, such as pleural effusions and pneumothorax; and in diseases of the pericardium, such as pericardial effusions. It is the decrease in the intensity of the first sound at the apex that often first suggests to us heart failure or weakness. The first sound may become as weak as the second sound and even shorter in duration and, when tachycardia exists, produce the so-called tic-tac rhythm. This again is a very important sign and still very often neglected. The character of the first sound may be so varied that it is confused

with the second sound. Especially is this true when the rate is rapid, with the systole the same length as the diastole and the first heart sound fainter than the second. This usually indicates marked myocardial degeneration. When such a condition is encountered, we can determine the identity of the sounds by palpating the carotid pulse. Often the first sound is masked by a systolic murmur and in such cases it is wise to listen at the base of the heart where the first sound is usually less masked by the murmur.

The second sound is best heard at the base of the heart. In cases of mitral stenosis, the pulmonic second sound is often accentuated. This accentuation is often stressed more than its importance would demand, though at times it may be of some assistance in making a diagnosis. In cases of chronic pulmonary disease, such as fibrosis and emphysema, the pulmonic second sound is accentuated.

An accentuation of the pulmonic second sound is an important sign of hypertension of the lesser circulation, as it has been termed by Moschcowitz. In the presence of hypertension it assumes much greater significance. As long as the left heart of the hypertensive patient is adequate, the second sound is louder over the aortic area than over the pulmonic area. When failure of the left ventricle ensues, the pulmonic second becomes accentuated. Perhaps even more important is this when the diastolic pressure is high. Some of these patients may live for several years, but in most cases right-sided failure soon sets in and the patient dies from this decompensation.

The aortic second sound is usually accentuated in cases of systemic hypertension, either with or without nephritis. Much has been written in the past about the accentuated aortic second sound in middle-aged individuals with luetic aortitis and aneurysm. In the absence of a well marked hypertension, an accentuated aortic second sound in a middle-aged individual is very suggestive of either luetic aortitis or aneurysm and steps should be taken to determine which is present. This accentuation is often heard better with the patient in the left lateral position. I recently saw a patient some thirty years of age with a mild decompensation and precordial pain. She gave a history of rheumatic attacks. Her pupils reacted equally to light and the knee reflexes were normal. Her blood pressure was 130 systolic and 20 diastolic, pulse 110, and temperature 101 degrees. She had the physical findings of an aortic regurgitation. It would have been quite easy to consider this rheumatic in etiology but in spite of her normal systolic pressure, there was a definitely accentuated aortic second sound which strongly sug-

gested lues as the etiologic factor. The Kahn test a few days later was 4 plus. Of course, even then, it was not positive which was the exact etiologic factor, but it was important to recognize the presence of lues. In the absence of a rheumatic history the etiology would have been much more certain.

A decrease in the intensity of the second sound is normally found in those conditions in which a decrease in the first sound is noted. In cases of myocardial weakness the aortic second sound is often weak. When this sound becomes weaker, during the course of observation, especially in the presence of tachycardia, the prognosis is poor.

In cases of numerous extrasystoles the aortic second sound is often decreased or entirely absent. This depends on whether the contraction is strong enough to open the aortic valve. The second sound may be obscured by a diastolic murmur.

In general, however, the most important causes for a diminution of the second sound are two: systemic hypotension and aortic stenosis. In neither, of course, is it a constant finding, for there may be other conditions which alter this. It is well known that not all cases of aortic stenosis have a decreased or absent aortic second sound. In some cases it is actually increased. Nevertheless, a decreased or absent aortic second sound in the presence of other suggestive findings is of assistance in making the diagnosis.

I recently saw a patient sixty-eight years of age, with a large ovarian cyst. Her cardiac findings were normal on physical examination and this was confirmed by electrocardiographic tracings. There was one striking thing about the heart sounds. In spite of a systolic pressure of some 80 mm., the aortic second sound was very snappy. This can of course be explained on the basis of aortic sclerosis. It does illustrate that certain factors may change conditions so that hypotension will not always produce a decreased or absent aortic second sound.

The study of heart sounds in cases of acute coronary occlusion is interesting. There is often a sudden transition from normally well heard heart tones to practically inaudible tones. This is a remarkable manifestation. The first sound at the apex is usually lost first, then the aortic, so that only the pulmonic second sound may remain. This indicates serious myocardial damage.

We have all seen cases in which the heart sounds were decreased or greatly masked by such factors as râles in the lungs and asthmatic breathing. More often we find a decrease in heart sounds when there is peripheral circulatory failure. It is more frequent and marked here than when the failure is central. Such a condition is

found in circulatory collapse following a severe hemorrhage or shock. It may be found in exhaustion from long illness and at times in apoplexy.

Let us now study another variation in heart sounds quite different from the above; namely, reduplication. First, we must have a definite idea of what we mean by reduplication. In this condition we have a narrow splitting of heart sounds and not a wide separation. It must be differentiated from two other conditions, that is, gallop rhythm and the normal third heart sound. If the closure of the mitral and tricuspid valves is not synchronous, we get a reduplication of the first heart sound. Likewise, if the moment of closure of the aortic and pulmonic valves is not synchronous, we get a reduplication of the second heart sound.

Clinically, we may get a reduplication of the first sound in some cases of mitral stenosis. Reduplication of the first sound in a case of acute rheumatic fever should suggest the possibility of cardiac involvement with a delay in auriculoventricular conduction. This may be the first clinical indication of cardiac involvement and should be confirmed by electrocardiographic tracing.

The second sound at the base is likewise often reduplicated in cases of mitral stenosis. This reduplication may be found in any condition which increases the pressure in the pulmonary artery. Only rarely does hypertension produce it.

At times both heart sounds may be reduplicated. Such a condition exists where the contractions of the auricles and ventricles are not synchronous. Clinically, this is found in cases of bundle branch block. If both heart sounds are constantly reduplicated and this finding is definite, we should rule out bundle branch block with the electrocardiograph.

The study of heart sounds in auriculoventricular dissociation is very interesting, especially the cases of complete dissociation. We now know that the contraction of the auricles produces a sound. Just what part, as stated above, this auricular sound plays in the production of the first heart sound, we do not at present know. Nevertheless, in cases of slight delay in conduction time, a reduplication of the first sound may result. More interesting to me is the change in heart sounds found in complete dissociation. In such cases, we may hear two or more contraction sounds between the normal first and second sounds. They are evenly spaced, which is obvious when we consider the mechanism, and are distinct from either heart sound. At times, however, as a matter of chance, these auricular sounds will synchronize with either the first or second heart sounds and in that way produce an accentuation. This finding is clinical.

cally very important. Let us take a patient with a heart rate of 35 per minute. Naturally, one of the first conditions we suspect is heart block. When we listen to the heart sounds in such a case and at various intervals hear either the first or second sound accentuated, we are justified in stating that the dissociation is complete. I have also seen two cases where in the presence of such a slow rate no accentuation of either sound was present. Here we should suspect the presence of auricular fibrillation and in the above cases this diagnosis was confirmed by electrocardiographic tracings. As is well known, in auricular fibrillation the auricles are in a state of diastole and consequently no auricular sounds are produced. Hence, no accentuation of either sound is possible. This is a very important observation to make in cases of bradycardia where heart block is suggested.

Let us briefly discuss one more variation in heart sounds. Gallop rhythm is one of the important and yet so often neglected clinical signs of cardiac pathology. In this condition we have three heart sounds produced with each cardiac contraction. Of these three sounds, two are the normal first and second heart sounds; the third is abnormal. This third sound occupies various positions in the cardiac cycle and from its location is classified in three types, the presystolic gallop, the protodiastolic gallop, and the mesodiastolic gallop. In the case of the presystolic gallop the third sound falls just before the normal first sound. If this third sound is heard shortly after the second sound, we have a protodiastolic gallop. Rarely the third sound will fall between the first and second sounds and is then called mesodiastolic. It is difficult at times to differentiate these types even when the heart rate is slow; when a tachycardia exists, it is impossible. The most common of these is the protodiastolic, which is six times as frequent as the other two. Just how this third sound is produced we do not know but it is thought that the protodiastolic may be a greatly accentuated third heart sound.

Clinically, gallop rhythm is found in hearts that have a regular rhythm with a moderate tachycardia, usually below one hundred. We should look for the presence of gallop rhythm in all cases of hypertension. It is often present in cases of acute coronary occlusion and will here direct our attention to the correct pathology when we are trying to differentiate an apparently acute upper abdominal condition from an acute coronary occlusion. In some cases of rheumatic heart disease with early involvement we may hear only a presystolic gallop which later may become a presystolic murmur.

Gallop rhythm should direct our attention to a

weak myocardium and may at times precede other signs of cardiac failure. The prognosis in cases of hypertension is not good, many patients dying in the course of a few weeks or months. In some cases when these patients are placed on digitalis and rest, the gallop rhythm will disappear, and the patient will live for several years.

Gallop rhythm may be found in other conditions where the prognosis is not so serious. Such a condition is neurocirculatory asthenia. Rarely is it found in mitral stenosis and partial heart block. Thus, before giving a prognosis, all of these conditions must be considered.

I hope that this discussion of the clinical study of heart sounds, their normal characteristics, their increase or decrease in intensity, their change in duration and pitch, and variations such as reduplication and gallop rhythm, with their indications, will arouse all of us to a more comprehensive and intelligent clinical study of cardiac cases. In this way we can often gain information at the bedside without the use of the electrocardiograph which will aid us in the treatment and prognosis of these cases.

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PRENATAL CARE*

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Successful obstetrics can be practiced if we follow out three apparently simple postulates: First, an easy labor; second, a live baby; and third, a mother who leaves our care in as good or better condition than when she entered it. How glibly we can say these things but to fulfill these requirements successfully 100 per cent of the time would be the utopia of obstetrics. An earnest, consistent, and intelligent effort will carry us a long way in our endeavor.

Too much emphasis has been placed upon operative obstetrics and the reputation of always being present throughout labor. Good obstetrics means a great deal more than clever salesmanship and a gentle bedside manner. It is relatively easy to practice the science of obstetrics but the art of obstetrics requires meticulous attention to detail.

When we consider the mortality in the United States from preventable diseases of pregnancy it well behooves us to give careful consideration to

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the routine of ante partum care. Over 4,000 women die annually from eclampsia, 800 from placenta praevia and ablatio placentae. Polyhydramnios, hydatidiform mole, missed abortion, and fetal monstrosity represent about one-fourth of one per cent of pregnancies. It is estimated that intelligent treatment of these conditions would more than cut their mortality record in two. Be that as it may, the thorough knowledge of the past and present physical condition, plus an active consideration of the individual reaction to the present pregnancy is necessary to the safe conduct of an individual in the pregnant state. I should like to enumerate for you the routine procedure that we have carried out in our practice, knowing in advance that you are all doing these things. It is possible, however, that the enumeration of them may bring home to us more clearly the necessity of routine habits in practice.

In taking an obstetric history, leading questions are of the utmost value. The knowledge that the patient has previously had scarlet fever, articular rheumatism, a heart or kidney disease, or undergone an operation, may change the entire aspect of an individual case. It is best to formulate a list of questions which will preclude the possibility of the patient's forgetting any essential history. For example, since the advent of automobiles, fracture of the pelvis has become a rather common accident. I have seen two cases relatively late in labor with callous formation inside the pelvis necessitating delivery from above. No history of the injury had been obtained. When the patient was asked about it, the reply was, "You didn't ask me." A printed history sheet is a necessity and can be easily typed on the back of a 4 by 6 inch office card.

We should have the mother's age and pre-and postmarital occupations; the father's age, occupation, general health, size, and weight; the duration of the present and past marriages, if any. The family history should include insanity, tuberculosis and cancer.

The past history, as mentioned previously, should contain absolutely all the pertinent data of that particular individual's life. Be just as searching as though you were going to assume personally the life insurance risk of the individual. Be sure to end your leading questions with, "When and for what did you last consult a physician?"

The menstrual history should show the age of puberty, the regularity and periodicity of the flow, the amount, the presence or absence of pain and the date of the last menstruation.

In multiparae the previous pregnancies, labor and puerperium should be inquired into, the signs of toxemia, amount of nausea, the duration, sever-

ity and termination of labor. The presence or absence of repair should be determined as well as the patient's own impression of it. The questions concerning the puerperium should include symptoms of infection, chill, sweats, fever, length of lying-in period, condition of nipples and breasts, and length of lactation. Did the previously attending physician ascertain by pelvic examination after the lying-in period the status of the pelvis? In the present pregnancy it is well to sense the patient's mental reaction, particularly in multipara.

The age, birth weight, and present health of each child should be known and if any are deceased, the cause of their death. If there have been abortions or premature labors, know the number, cause and the duration of pregnancy. Inquire as to complications, particularly as to infection. Evaluate the symptoms as to spontaneous or induced abortion. Practically all spontaneous abortions are preceded by cramps and then bleeding. In induced abortion the condition is reversed.

The degree and amount of nausea and vomiting, as well as the time of day it usually appears, the presence or absence of leukorrhea and its character, duration and rapidity of its appearance are all pertinent. Headache should be evaluated carefully as to type, position and familiar tendency. If any bowel condition is present, we should know when constipation started, the type and amount of cathartics used, and what exercise and dietary measures have been instituted.

In the urinary history, urgency, frequency, and nocturia should be noted.

Any unusual condition, such as food cravings, desires, dislikes, and nervous instability, if carefully evaluated, will frequently afford valuable information.

In the routine physical examination our first effort should be to establish definitely the diagnosis of pregnancy and the fact that it is intra-uterine. We have at our command the routine of pelvic examination, change in size, shape and consistency of the uterus, plus the history. In addition to this a good deal of reliance can be placed upon the Aschheim Zondek test. This laboratory test has been used for about two years and is dependable about 98 per cent of the time. It is, of course, most valuable early in pregnancy, before the tenth or twelfth week. The routine pelvic examination will be of most value in experienced hands. The observation of posture, gait, shape of head, length of forearm, and size of hands is helpful. It is frequently possible to make a tentative diagnosis of pelvic deformity, contracted or male-type pelvis, or hip joint disease, a few moments after a patient has entered the consultation room. Careful routine physical examinations show many important

things, such as luetic change of pupillary and other reflexes, infected teeth and tonsils, enlarged or hyperactive thyroid, lung conditions, or heart changes.

In the pelvic examination particular attention should be paid to external pelvic measurements. I should like to call your attention to the value of the perpendicular measurement. The distance from the symphysis to a horizontal line drawn between the anterior-superior iliac spines will quickly classify male and justo minor type pelvis. Careful evaluation of previous obstetric injuries or congenital defects is necessary, with due thought given to remedial measures.

Internal pelvimetry is relatively inaccurate and negative or normal findings are of no value.

A complete blood count, with Wassermann test should be routinely made and the blood count repeated if abnormal conditions are present. Secondary anemia is frequently found and may change the estimation of the severity of labor if untreated or seen late in pregnancy.

Urine examination, both chemical and microscopic, is necessary. Any deviation from the normal calls for a catheterized specimen. When pus or blood is present a routine cystoscopic examination should be made to determine the origin of the pus or blood plus the function of each kidney. The introduction of iodid into the kidney pelves for x-ray visualization is not contra-indicated during pregnancy. Twenty-four-hour urine specimens are most valuable in determining changes in specific gravity and in checking intake and output. The presence of albumin need not be discussed.

Blood pressure determinations are so routine that patients usually expect them and the physician who neglects them shares equal guilt with the one who neglects urine examination. We must determine if hypertension is essential or eclamptic. The health and life of both mother and baby is dependent upon our judgment in the pre-eclamptic state.

Routine weight determination shows not only the normal weight gain but frequently emphasizes the edema of toxemia or the sudden weight increase in polyhydramnios. Twenty to twenty-two pounds should represent the normal gain.

Instruction to mothers, especially primipara, becomes a privilege. To allay fears, to refute foggy stories, becomes a pleasure. Impress the normality of the pregnant state, dwell upon the happiness and joy of the coming event. Make of it a period of joyful expectancy.

Exercise of any or all kinds, with few exceptions, should be encouraged. Swimming, horse-back riding, golf, and walking are beneficial. It is

foolish to encourage new types of exercise. Violent exercises, such as tennis, are hazardous.

Oral hygiene, with several visits to the dentist, should be insisted upon. Most types of oral pathology are fulminating during pregnancy. Early preventive measures give the maximum of protection.

Support of breasts and abdomen should be explained adequately. Since breasts have no muscular support, a pocket-type brassiere should be worn, so that shrugging the shoulders lifts the breasts. Careful and detailed instruction as to care of nipples is the best insurance against cracked or bleeding nipples and breast infections. The nipples should be scrubbed once daily with a coarse washcloth, soap and water. They should then be rolled between the thumb and forefinger for about two minutes with sufficient pressure to cause slight pain. In the last six weeks of pregnancy some styptic should be applied after this routine procedure. In no event should oil of any type be used, as nipples are much too soft in their original condition.

Abdominal supports of all types as a routine procedure are taboo. Discuss the emancipation of womankind from the corset and stress the damage done to the abdominal musculature by support. When sacro-iliac strain or like disorder necessitates support, explain that this is being done at the expense of the abdominal musculature. The lower half of the abdomen and breasts should be routinely massaged with cocoa butter or olive oil, beginning at the third month and continuing to about the end of the eighth month.

Crusade for proper fitting shoes with sufficient width of heel to prevent rolling of the ankles and resultant falls.

Diet should be preferably of the fruit and vegetable type with not too much roughage. Coffee, tea, and alcoholic beverages should be precluded in the last trimester. Diet management by the patient should be consistent with normal weight gain, 20 to 22 pounds, and the final disposition thereof should rest entirely with the physician. The ingestion of large quantities of fluid minimizes constipation and relieves to a large extent the load upon the kidneys. Discuss bulk habit and fluid in its relationship to constipation. Give information in regard to the usual constipation of the latter months of pregnancy. If dietary measures fail select one of the non-habit forming types of laxative.

Encourage bathing except in the latter weeks of pregnancy. Douches should be used sparingly, if at all, in normal pregnancies, because of the antiseptic action of the normal vaginal secretions.

Explain the dangers of intercourse in the latter months of pregnancy.

Toxemia and cardiovascular renal disease is perhaps the most important phase of pathologic pregnancy. Toxemia of pregnancy should be divided into pre-eclamptic and eclamptic states. Anticipation plus hospitalization with increase of elimination, sweats, colonic flushes and appropriate diet give uniformly good results, except in fulminating cases. Intravenous glucose and magnesium sulphate, hypodermically, are of definite value in the treatment. Emptying the uterus is of course the only treatment of lasting benefit. Our only consideration is for the fetus and it sometimes requires a delicacy of judgment plus a maximum of experience to decide when to institute this procedure. As a rule, the well-being of the mother is of prime importance and when certain alarming conditions occur, active intervention should be instituted. Certainly when the possibility of carrying the pregnancy to viability of the fetus is remote, active intervention simply prevents permanent damage to the mother.

Patients with well compensated valvular heart disease usually pass through an uneventful pregnancy. However, history of previous decompensation or presence of decompensation usually calls for interruption of the pregnancy. Special directions with regard to rest and exercise should be given. Any suggestion of decompensation calls for absolute rest in bed with appropriate medication. When pregnancy must be terminated in cardiac patients the abdominal route with sterilization is usually the method of choice.

Cystitis requires local treatment, bland diet, urinary antiseptics, et cetera.

Pyelitis is sometimes very difficult to manage because of the mechanical problems of pregnancy. The use of indwelling urethral catheters has been of value in many cases. The uterus should not be emptied unless all other remedial measures have been given a fair trial.

Placenta praevia and abruptio placenta cases should be hospitalized if possible. The treatment varies slightly with the trimester of pregnancy and the extent of the placenta praevia. The first effort should be the typing of the patient for transfusions and no intravaginal or intra-uterine procedure should be attempted without this preliminary preparation. A very few grave cases can be expected. When the blood count is below 3,000,000 transfusion should be given before operative interference. When it is above, intravenous salt with adrenalin and pituitrin will usually suffice.

Abortion should be classified as spontaneous or induced, clean or septic, threatened, missed, or

inevitable, incomplete or complete. In missed abortion the uterus should be emptied when the diagnosis is established. The same could be said of incomplete and inevitable abortions provided they are clean. It is a good rule never to assume the care of a case of induced abortion without a written statement, signed by a witness, as to who induced it, the method used, and the time and place. We most certainly should not refuse treatment but the wise course is to be adequately protected. The treatment of threatened abortion needs no discussion. Hydatidiform mole, because of its rarity, will not be discussed.

Premature rupture of the membranes should be treated expectantly except in pyometra, when active intervention should be instituted.

Morning sickness, pernicious vomiting and gastro-intestinal disturbances furnish an almost universal necessity of treatment. The usual nausea and vomiting responds nicely to luminal and bromid, carbohydrate diet, and frequent meals, seven to nine per day. It is important that we emphasize the necessity of drinking our fluids apart from meal times and in small quantities, often repeated.

Pernicious vomiting should be treated in much the same manner plus hospitalization, with more attention to detail of amounts of medication and diet. Intravenous glucose is of definite value. Do not wait too long to empty the uterus or many fatalities will result.

Gastro-intestinal disorders include a variety of conditions, oral pathology, gastric ulcer, cholecystitis and cholelithiasis, appendicitis, colitis, intestinal obstruction and rectal diseases. No discussion will be made of these conditions as their ramifications would be endless.

Venereal disease may be a grave problem to both the mother and the child. Cases should first be classified as to time of appearance and trimester of pregnancy, and secondly as to severity—acute, subacute, or chronic. A general rule to follow would be to overtreat rather than undertreat. Gonorrhea can best be treated with vaginal tampons of mercurochrome, 10 or 15 grains, suspended in glycerin given three or four days apart. Some silver suppositories, such as protargol or neosilvol, should be used twice daily when the vaginal packing is not present. Douches usually do more harm than good. Intra-urtehral instillations of milk silver protein solutions are beneficial. Syphilis should be treated with alternate courses of neosalvarsan and mercury, and skin and kidney conditions carefully noted. Treatment in the last trimester of pregnancy is attended by far greater risk to the patient and should be watched accordingly. Refuse care to uncoöperative patients.

Tuberculosis may be pulmonary, boney or urogenital. It rarely affects the fetus in utero unless miliary. Pulmonary tuberculosis is most common. In the first trimester of pregnancy it may present a serious problem. There is a wide diversity of opinion regarding the treatment. Some believe that the uterus should be emptied routinely, others, although they agree that the pregnancy is definitely deleterious, will never agree to abortion. There should be some sensible position between these two extremes.

Patients with benign apical lesions or moderately advanced cases of the fibrotic type can as a rule safely attempt pregnancy. On the other hand, if a patient has a destructive lesion or if the disease has only recently been arrested, the combination of pregnancy, labor and puerperium may become a lethal factor. It is definitely dangerous to allow repeated pregnancies when the patient develops recurrence of an old lesion, no matter how benign. These patients should have the uterus emptied by the abdominal route with sterilization. Cases showing activity or those recently healed should be aborted preferably before the third month. In the class of cases which are seen late in pregnancy our only consideration is the effect delivery will have upon the patient. If there has been cavitation shortly before or early in the pregnancy, if there have been symptoms of a destructive lesion present, the operation of pneumothorax should precede or accompany delivery. Tuberculous mothers should not nurse babies and it would be much safer if they had nothing to do with their care. Fifty per cent of babies die in their first year when cared for by tuberculous mothers.

Tumors of various types, cysts, interligamentous and ovarian malignant tumors which will furnish obstruction at the time of delivery should be removed early in the pregnancy, with the exception of fibroid tumors. Late, cesarian section should be performed, with removal of the tumor. Malignant conditions discovered early in the pregnancy should be treated adequately without regard to the fetus. At or near the time of viability the life of the baby should very definitely enter into the plan of treatment. A condition not frequently mentioned in the literature is contracting fibroid. This gives a symptomatology resembling very closely that of ectopic pregnancy. Myotomy, with emptying of the uterus, is the most satisfactory treatment.

Position of the uterus early in pregnancy may produce a great deal of trouble. A retroverted, incarcerated, pregnant uterus with its increase of nausea and vomiting, abdominal disturbances and ultimate death of the fetus with abortion should give us no little concern. Early in the pregnancy

it may be lifted up out of the pelvis and held up by packing, with rest in bed and abdominal prone position. Later it is usually necessary to open the abdomen and perform the so-called Crossen modification of the Todd Gillin suspension. This gives rather good results.

Postmaturity is of definite danger to the mother and child, increasing the severity of the labor by weight increase of the child, increase in the density and decrease in the elasticity of the bones of the skull. These conditions add to the incidence of cerebral hemorrhage and other types of fetal injury. Not infrequently they furnish a dead fetus before the onset of labor. Medical induction of labor is safe and of value in these cases. A certain per cent should be induced mechanically, preferably by the bag method, if they fit bag indications.

CONCLUSIONS

1. Maternal and fetal mortality could be lessened definitely by standardized routine of antepartum and post partum care.
2. Pathologic processes would better be treated by generally accepted routine methods.

POSTNATAL CARE*

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From the Department of Obstetrics and Gynecology, University of Nebraska College of Medicine.

Care of the expectant mother before confinement has been taught, practiced and emphasized during the last few years until today all over the country, both in free clinics and in private practice, prenatal care is on a sound rational basis, not only for the treatment of the prenatal case, but as a prevention of possible complications.

On the other hand, there are few clinics giving good postpartum care, in spite of the fact that it is essential. With most physicians postpartum care consists of a little attention ten to twelve days after delivery and perhaps an examination at the end of six to eight weeks. Often this is a careless examination and many real pathologic conditions are overlooked. The postnatal period should be considered as extending from the end of the third stage of labor to at least the third month after delivery, when all organs have returned to their normal status.

Let us take a patient who has had good prenatal care and a normal delivery. How should she be cared for today? First, blood loss should be prevented by immediate injection of an ampule of pituitary extract; and later, if necessary, by an ampule of ergot. The blood loss should be less

*Presented before the Woodbury County Medical Society, Sioux City, February 18, 1932.

than 300 c.c. whenever possible. Next, all lacerations of the perineum should be repaired at once; whether they are tears or episiotomy. I believe this is the universal custom. The day when the doctor left a tear unsutured because he feared criticism if he repaired it, is past. It is no disgrace to have a tear, but it is a disgrace to leave it. I believe the sensible procedure today is to perform an episiotomy, if by so doing, deep, ragged, uncontrolled tears, or cystocele and rectocele can be prevented. A knee strap and careful perineal toilet by the nurse are essentials to the proper healing of any repair. Next the nipples are scrubbed and a loose binder is applied to the breasts. A tight binder is applied to the abdomen and left for twelve hours, after which no abdominal binder is used.

The child should be identified by footprint, necklace or some foolproof method and the mother returned to a bed as carefully warmed and prepared as for a postsurgical case and watched by an observant individual for at least one hour. If necessary, and in most cases it is, the mother should have rest by means of a sedative. Visitors should be barred and the baby should not be brought into the room for at least eight hours, unless persistent bleeding continues due to relaxation of uterine musculature which is not amenable to the usual treatment. Then the child is put to the breast. This often acts as a wonderful remedy, as nursing stimulates involution. An icebag over the pubis is routine procedure for the first twenty-four hours. Any temperature above 99.5 degrees should be considered abnormal and its cause sought. A chill should not be considered simply a nervous manifestation because no other abnormalities can be found at the time. Watch the patient for development, as a chill usually means trouble. The pulse is a more sensitive indication of abnormalities than the temperature, but less certain because it is so easily affected.

The patient should be encouraged to urinate by the usual methods and if they are not effective, catheterization followed by instillation into the bladder is resorted to. There is less danger from catheterization if properly done than there is from the trauma of a full bladder. If necessary to catheterize more than three times at six-hour intervals, a soft rubber mushroom retention catheter should be placed. Enemas are given for the proper opening of the bowels daily after the second day. The diet consists of liquids for the first twenty-four hours, then soft foods for a like period and then, if there are no complications, the patient may have a regular diet. In those patients who have not had toxemic symptoms a high protein

diet is conducive to an abundant milk supply. It is always a wonderful thing to me that the human breast can bloom into function so efficiently. Binders, ice and depletion by saline cathartics and some restriction of fluid intake are needed in most cases. Of course both before and after nursing the nipple should be cleansed with either boric acid solution or hypochlorite. If a nipple has been properly cared for during the prenatal period, cracks, fissure and resulting abscesses rarely occur. It is however absurd to spend many weeks in nipple care and then allow a strong, husky, newborn infant to traumatize and bruise an empty nipple and cause real damage in that period before the milk comes in.

Exercise during the lying-in period is essential but there is no reason to make a gymnast or Japanese tumbler out of the parturient woman and it may lead to actual harm. Arm exercise and deep breathing reduce blood stagnation and keep muscles in tone. Leg exercises are used only in the unlacerated cases and the patient is turned on the abdomen three times a day for thirty minutes after thirty-six hours. This is to promote vaginal drainage and not to maintain uterine position.

The large puerperal uterus, at first extending almost to the umbilicus, will not retrovert until involution has brought it at least entirely into the true pelvis. Therefore the knee-chest posture is of no benefit until after the patient has left her bed, and may be used until the time of her first postpartum examination at the end of six weeks.

With regard to care of the cervix, the profession is divided into four schools; those who advocate immediate repair after labor; those for intermediate repair; the ones who advocate a return visit to the hospital some months postpartum for operation; and those who pay no attention to the cervix. The last group, of course, is the most reprehensible. Personally I like the Coffee intermediate cervical repair. I examine on the seventh day and repair appreciable tears then. To fear infections from mere examination is an admission of careless technic in the procedure of examination. The seventh day repair does not lengthen the lying-in period. Plastic cautery repair of small tears may be done at the end of the third month with good results. I believe that proper care of the cervix will reduce headaches and nervousness and in some cases cut down cervical discharge. It is the best prophylactic means we have of preventing cancer of the cervix. I have no patience with the doctor who does not examine for cervical lacerations and yet states that in his practice they do not occur. There is much difference of opinion

as to the proper time for the patient to get up. In a normal puerperium the mother sits up in bed on the sixth day, with her feet over the side. She can get out of bed on the seventh and eighth days for fifteen minutes; twice on the ninth day, and can walk around the room on the tenth to the twelfth day. One mother, however, may be as fit to go home on the ninth day as another on the fourteenth day. The early getting up does not in all cases possess the advantages claimed for it and in spite of custom and practice the patient should stay in bed until you feel it is safe for her to be up. She should not get up if she has bloody lochia, fast pulse, or elevated temperature, or if she is not feeling fit.

Careful instruction should be given the mother when she returns home from the hospital or at the end of the lying-in period, and a ten-minute talk with her is in order at this time. She is told about care of the breast, exercise and bathing and instructed to return to your office at the end of four weeks. At that time a careful, painstaking examination is made with return visits advised if in your opinion they are required.

In the routine postpartum examination we have an opportunity to check up on the general condition of the patient and particularly on the local pelvic condition. In approximately half of the patients one will find a pathologic condition consisting of either a retroverted subinvolved uterus or a red, angry looking cervix which bleeds on the slightest manipulation. Chronic endocervicitis is always due to bacterial invasion. Not only does the cervical infection cause induration of the broad ligaments with its associated congestion of the pelvic organ, but by an increasing number of men it is considered a pelvic tonsil as a focus of infection.

Any one of us who has tried to treat such a cervix with topical applications and tampons can realize the full value of the cautery in treating erosions. Cauterization can be done as early as the eighth week after labor, although better after the twelfth, and can be done in the office without anesthesia. After a bivalve speculum has been inserted in the vagina and the mucous discharge wiped out, the cervix is painted with mecrochrome. The ordinary small nasal cautery tip is inserted into the cervix, the current is turned on and the tip is gradually withdrawn, extending the cauterization to the edge of the erosion. This is repeated until there are several lines, like the spokes of a wheel, extending from the os to the periphery of the erosion. The placing of the cautery lines varies with the shape of the erosion and the type of lacerations sustained by the cervix. If there are any small cysts in the cervix, these

should be cauterized also. Some men like the Post cautery better.

Although the cervix is almost insensitive to pain the mucous membrane of the vagina is exquisitely sensitive and great care should be exercised not to approach it with the cautery. The vagina may be protected with asbestos paper or cooled with compressed air. Cautery treatment is followed by an increased amount of discharge, changing from purulent to watery for a week or ten days, usually followed by complete healing. Occasionally a second or third application of the cautery is necessary. So effective has this treatment been that in many clinics trachelorrhaphies and other operations for cervical lacerations and endocervicitis have been abandoned.

The last measure which I wish to mention is the use of the pessary. In the tidal wave of surgery that has swept the country in the last decade this valuable instrument has been submerged. Many observers have shown that retroversions of the uterus occur in from 40 to 50 per cent of postpartum cases. Exercises help to prevent this and in some cases cure it, but there remains a definite percentage which requires a mechanical support and by no non-operative method can this support be obtained better than with a Hodge or Smith pessary. After replacement of the retroverted uterus, the depth of the vagina is measured and the approximate size pessary is selected and introduced. The proper selection and painless introduction of a pessary is an art which can be acquired only by practice. The pessary should not be so large that the finger cannot be passed around it easily nor so long that it impinges the urethra against the symphysis. Too small a pessary will not offer any support. The after-treatment consists of a cleansing douche every day, or every other day and of an examination, exchanging the pessary after three days, then two weeks, then every three months.

Whether the pessary can ever cure retroversions permanently is a question. All of us have records of permanent cures in many cases. Those patients who are not cured, obtain relief from their symptoms during the childbearing period, when we all are reluctant to urge major operative procedures; the results of which may be nullified by subsequent pregnancies.

Postnatal care consists of many disjointed details which are easily forgotten or overlooked. For this reason it is well to have a routine established in the hospital which is carried out automatically, making exception only when necessary.

To sum up, we attempt to return our puerpera to their household and social activities with all the energy and vigor of their youth by careful

repair of the birth injuries, by promoting involutions by natural stimulation, i. e. by breast feeding, by reestablishing intra-abdominal pressure, by exercising the abdominal muscles, by postural drainage of the vagina and venous plexes of the pelvis, by thermal cauterization of the infected cervix, and by replacing and maintaining in position the retroverted uterus.

These are all comparatively simple procedures but require patience and perseverance both on the part of the physician and the patient. However, so long as abdominal incisions become infected, so long as laparotomies are frequently followed by adhesions, so long as surgical correction is not unfaithfully successful and so long as anesthesia is not without mortality, such persistence and care seem well worth while.

APPENDICITIS AND PYURIA

ARTHUR L. NIELSON, M.D., Harlan

Every report of a series of kidney and ureteral cases mentions and many emphasize the large percentage of these patients who have undergone appendectomy without relief or benefit. So much has been written and said concerning the necessity of ruling out right kidney and ureteral conditions in the diagnosis of acute appendicitis that at least occasionally we lean backwards and ascribe symptoms to urologic disturbances when the appendix is the actual offender.

The occurrence of pyuria in patients with acute abdominal pain does not necessarily explain the pain, i. e., does not absolutely mean that a pyelitis is the cause of the abdominal pain. The relationship of pyuria and appendicitis may be coincidental or it may be causal. It has been said that it is never wise to diagnose two conditions when one diagnosis will explain the symptoms, but it is much less wise to fail to recognize a condition, neglect of which may lead to serious results. Obviously there can be nothing to prevent a patient who carries pus in the urine from kidney, ureter, bladder, or urethra from having appendicitis. Such a coincidence may be rare but nevertheless does occur. Thompson¹ reports pyuria in three out of two hundred consecutive cases of acute appendicitis. The extreme variation in the location of the appendiceal tip is well known. In the retrocecal variety particularly, the appendix may come into close relation with the right ureter or kidney and this contiguity explains the pyelitis or ureteritis with resultant pus in the urine. Montgomery² states that occasionally we find pus cells in the urine of appendicitis patients when the involved tip of the appendix rests against or is

adherent to the ureter which passes down behind the peritoneum in this region.

There are reports of some twenty cases in which appendiceal abscesses have ruptured into the bladder, causing pyuria. This represents an association of appendicitis and pyuria that is at present very rare and is not of great importance.

REPORTS OF CASES

Case 1. J. J., a man aged forty-two, was first seen September 30, 1926. He had suffered an attack of severe abdominal pain following a period of malaise, lasting one day. There had been neither nausea nor vomiting. He complained of general body aching. There was moderate tenderness over the right side of the abdomen, but no rigidity. The temperature was 101°, pulse rate 84. Urine examination showed albumin 2 plus, and pus cells 3 plus. There were no bladder symptoms. The white blood count was 13,600. Fist percussion of the back was negative. With a diagnosis of pyelitis, local heat was applied, morphin given to control pain, enemas were successful, and fluids with urinary antiseptics were administered. Two days later the symptoms were much relieved. There was still some tenderness of the right side of the abdomen, the temperature was normal and there was no pain. Urine pus cells were 1 plus and the patient was considered convalescent. On October 5 pain was again complained of, examination revealed a mass in the lower right abdomen and operation showed an appendiceal abscess. Recovery followed the appendectomy with drainage. Three months later one urine examination showed neither pus cells nor albumin.

Case 2. M. H., an unmarried woman, aged twenty-five, was first seen on February 13, 1930, with complaints of backache, frequency of and burning on urination, which had continued for some three weeks. There had been a few slight attacks of similar nature for the previous two years. The symptoms were aggravated by exertion. There had been moderate anorexia but no abdominal pain. Urinalysis showed pus cells 4 plus. Alkalinization was carried out with marked relief until February 19, when a severe attack of abdominal pain occurred. Examination February 20 showed tenderness and rigidity over the lower right abdomen. The temperature was 101.6°, pulse rate 114. The urine pus was graded 3 plus. Feeling that an acute appendicitis could not definitely be ruled out, operation was performed February 20 at 5:00 p. m. Through a right rectus incision a retrocecal appendix, with its tip adherent to the posterior abdominal wall, near the right kidney pelvis, was found and removed. The appendix showed acute suppurative inflammation, non-perforated. The first forty-eight hours following operation were stormy, with temperature elevation to 104°. The urine pus cells continued for eight days. A stitch infection complicated the wound healing. On the twentieth postoperative day the wound was completely healed.

the urine was negative and the patient was free from symptoms.

Case 3. Mrs. L. P., aged twenty-two, was first examined July 9, 1930. Her chief complaint was urinary frequency and burning, of two weeks' duration. There had been some abdominal pain, nausea and occasional vomiting. Examination revealed marked tenderness over McBurney's point, but no rigidity. The temperature and pulse rate were normal. Tenderness on fist percussion over the right kidney was 2 plus. The urine showed pus cells, 1 plus, otherwise negative. A dietary regimen and administration of urinary antiseptics carried out over the following three weeks proved to be of no benefit. The urinary symptoms continued and attacks of moderately severe abdominal pain associated with vomiting were quite frequent. Examination at this time showed the same abdominal tenderness with slight rigidity of the lower right rectus. Urinalysis report was pus cells 2 plus, albumin negative. The white blood count was 14,000. With the second case in mind, a diagnosis of subacute appendicitis associated with pyelocystitis was made and operation advised. Appendectomy through a right rectus incision showed a subacutely inflamed, engorged appendix, not adherent, but lying over the ureter at the pelvic brim. The meso-appendix was short, causing a distinct kink in the appendix. Convalescence was uneventful, bladder symptoms disappeared, and urine examination did not show pus cells. This patient is now seven months' pregnant and frequent urine examinations have failed to show pus cells. There was urinary frequency during the earlier months of the pregnancy but no burning or distress on urination.

There is no pathognomonic symptom or sign of either pyelitis or appendicitis. There are various points in type of onset, temperature reaction, location of pain, muscular rigidity and degree of leukocytosis that in typical cases serve to differentiate between appendicitis and pyelitis. Tenderness over the right kidney on fist percussion is a valuable sign indicating renal involvement and is not likely to be present in appendicitis. Skin hyperesthesia in pyelitis is usually at a higher level than in appendicitis and also in pyelitis is found to include the skin of the back as well as of the abdomen. In the atypical case, however, none of these points can be depended upon to definitely decide the diagnosis.

In any patient suffering an attack of abdominal pain with nausea and vomiting, localized rigidity, and leukocytosis, i. e., an attack with the earmarks of an acute appendicitis, the finding of pus cells in the urine is not sufficient to discount the diagnosis of appendicitis. The subacute type of disease lends itself safely to a period of study that should determine the diagnosis, but in the acute case, when it is impossible to rule out appendicitis, oper-

ation is safer than expectant treatment. This plan is not proposed to lend support to indiscriminate surgery, but as a procedure in severe cases, in which if the appendix is the seat of the trouble, delay may have serious consequences.

CLINICAL RESEARCH AWARD

Mead Johnson and Company announces an award of \$15,000 to be given to the investigator or group of investigators producing the most conclusive research on the vitamin A requirements of human beings.

Requirements

Candidates for the award must be physicians or biochemists, residents of the United States or Canada who are not in the employ of any commercial house. Manuscripts must be accepted for publication before December 31, 1934, by a recognized scientific journal. Investigations shall be essentially clinical in nature, although animal experimentation may be employed secondarily.

Committee on Award

The committee on award will consist of eminent authorities who are not connected with Mead Johnson and Company, the names of whom will be announced later.

Source of Supplies

There are no restrictions regarding the source of vitamin A employed in these investigations.

For other details of the Mead Johnson Vitamin A Clinical Research Award, see special announcement, pages 14 and 15, in Journal of the A. M. A., January 30, 1932.

NEW UNIVERSITY HOSPITAL AT UNIVERSITY OF MARYLAND

Plans for the new \$1,500,000 building for the Maryland University Hospital are complete. Funds voted at the last session of the General Assembly will be made available in two installments in February and August. Plans call for a 400-bed hospital in the shape of a cross with provision for 250 training beds. The remaining accommodations will be for persons of moderate means, including a few private rooms. The building, which will be erected either on the site of the present hospital or in the vicinity of other university buildings, will be 12 or 13 stories high.

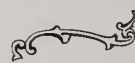
DR. WAYNE J. FOSTER HONORED

Dr. Wayne J. Foster, eye, ear, nose and throat specialist, of Cedar Rapids, was elected vice president of the Alumni Association of the University of Iowa, according to an announcement made by Frederic G. Higbee, executive secretary. Alumni throughout the state cast their ballots by mail between March 1 and April 1. Dr. Foster received a degree in medicine from Iowa in 1917. The other officers include Robert J. Bannister, of Des Moines, president, and Gordon C. Locke, of Cleveland, Ohio, also a vice president.

STATE HEALTH COMMISSIONER'S PAGE



D. C. Stulman, M.D.



The Practicing Physician and Public Health

During the past several months, the relation of general practitioners of medicine to public health activities has been discussed on this page. An attempt has been made to indicate the economic benefits to the practitioner from active participation in such a program.

No one knows the particular health necessities of a community better than the local physician. No group may know the needs of a county in public health matters better than the county medical society. Knowledge by the county society of the health conditions in the county and other facts pertaining thereto does not prove beneficial to either the public or the physicians unless used in a manner that will tend toward correction of the existing conditions.

No group of people has in the past nor can at the present time exert as much influence for the protection of the public health as the regular practicing physicians. The basic principle of organized medicine is the dissemination of facts to the members of the profession and to the public for the benefit of mankind. The application of this

principle will bring the best returns, not only in money, but in peace of mind, knowing that the job has been well done. To obtain the best results requires close cooperation between the organized practitioners and official public health organizations in order to avoid misunderstandings and mistakes.

This relation has been cultivated in Iowa and we must credit whatever success has been achieved to this fact. Information of this relation has reached outside the state, since but last week a member of the staff of a department of health of one of our southern states visited us to ascertain why the Iowa State Department of Health and the Iowa State Medical Society had such full cooperation. This whole-hearted cooperation must continue if we hope to reach our aim.

This department will continue to solicit the advice and counsel of the officials of the State Medical Society as in the past and it is hoped that much thought and consideration will continue to be exerted on the part of the council of the society in rendering this assistance.

PREVALENCE OF DISEASE

Disease	May 1932	April 1932	May 1931	Most Cases Reported From
Diphtheria	39	31	24	Polk, Pottawattamie
Scarlet Fever	158	234	237	Polk, Woodbury
Typhoid Fever	12	8	1	Carroll, Worth
Smallpox	119	176	274	Pottawattamie, Clinton
Measles	21	13	271	Buchanan, Floyd, Johnson
Whooping Cough	70	105	108	Black Hawk, Lee, Woodbury
Cbs. Meningitis	3	4	1	Boone, Grundy, Polk
Chickenpox	136	143	186	Lee, Des Moines
Mumps	126	114	107	Mills, Johnson
Polioomyelitis	0	2	0	
Tuberculosis	55	63	34	Linn, Taylor
Undulant Fever	5	8	3	(For State)
Syphilis	172	166	76	Polk, Woodbury
Gonorrhea	228	187	99	Polk, Black Hawk

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OFFICIAL NOTICE

The Board of Trustees of the Iowa State Medical Society, at its regular meeting June 10, 1932, did not re-elect Mr. Vernon D. Blank as managing director of the Society. His term of office, therefore, terminated July 1, 1932.

The work of the central office and its various activities will be temporarily under the charge of Mrs. Dorothy McCarthy, who was reappointed chief clerk of the office, and Mrs. Virginia Bennett and Miss Dorothy Nelson, who were also reappointed as clerks.

The Board of Trustees will at some subsequent time determine who shall be chosen as managing director.

Oliver J. Fay,
Gordon F. Harkness,
Edward M. Myers,
Trustees.

DIETS—THE AMERICAN FAD

Scientific knowledge regarding the various nutritional requirements of the normal individual has multiplied itself with such rapidity that the lay mind and, in many instances, the more trained scientific mind have been confused by the data submitted. Scientists and pseudoscientists have developed innumerable diets, some scientific but many without the least semblance of scientific accuracy. Diets may be considered the great American fad, and in many instances, have been devised by persons untutored and untrained in such matters. That we have gone too far in the matter cannot be gainsaid, since every practicing physician has had occasion to see the irreparable damage which has been done by ill-advised individuals attempting to manage their own diets.

Not so long ago, a very competent physician addressed a lay audience using as his theme, "Diets Be Damned". Certain individuals assumed

from this somewhat spectacular title that the lecturing physician did not believe in any form of diets or dietary management, and some even believed that he would do away entirely with diets, regardless of the condition. It was apparent from the text of the talk that such persons read into the address what they wished to hear, rather than that which was said, and in some instances, at least, it was the same persons who had but shortly been led to follow a freakish fad in food who misunderstood the message of this lecturer. Certainly, no one could have taken exception to this title had it read, "Fads in Diets Be Damned".

Among the more primitive people or those who, because of economic conditions, find it impossible to devote much time or money to following food fads, there seems to be a natural adjustment toward a complete and adequate diet. This adjustment is, no doubt, highly unscientific, as measured by the food faddist of today, but it has been demonstrated to be entirely sufficient. The world's most outstanding example of dietary imbalance or deficiency would appear to exist among the Chinese people, where, it is popularly supposed, rice forms the chief element of diet. Scientific investigation indicates that this popular notion is correct and that rice does constitute the chief element. However, even among the poorer Chinese, we find that the rice diet is supplemented by generous quantities of coarse vegetables, soy-beans, eggs, citrus fruits and, to a limited extent, meat, all parts of the animal being eaten, even the blood. Such a diet, while not meeting the American standard, does meet the scientific standard, even in calcium, and in many respects is superior to one frequently found among the poorer classes in this country. An even more striking example is to be found in the Slovak diet as generally observed among the Czecho-Slovakian population in Europe. Here we find the staple articles of diet to be sour milk and cream, and cottage cheese made from them, black rye bread, cabbage used fresh in summer and as sauerkraut in winter, and dried fruit, such as apples and prunes. This diet was varied somewhat seasonally by fruits and vegetables which were grown on the native farms. While this diet might prove highly monotonous to the more finicky American taste, it has been proved by scientific comparison to be entirely adequate and to contain the necessary elements in proper amount for health maintenance. It is interesting to note that these people, when transferred to American soil, develop dietary habits which are quite inadequate. Here the best features of the native diet, the whole grain rye bread, the abundant milk or cream and the vegetables, have been abandoned for white bread and more highly flavored food, meat, coffee

and sugar, with resulting deficiencies. This diet, although considered by its users as superior to the old one, is plainly inferior in every respect. It is particularly deficient in calcium and low in all of the vitamins. Among the Chinese people and the Czecho-Slovakians, the establishment of this adequate diet has not been made by scientists but is rather the development of many generations of natural selection.

Consider, if you will, the recent sixteen day diet formulated and presented to the public, I am told, by a cinema actress in Hollywood. Was there anything scientific about that diet? Did it contain those elements necessary for the maintenance of health and nutrition? Almost every physician has seen instances where such a diet has been followed to the extreme detriment of the individual's general health. Consider, also, the so-called reduction diets in which thyroid extract has been generously introduced for the purpose of speeding up body metabolism. Time and again such a diet has been demonstrated to be not only defective but frankly and without doubt unfavorable for the maintenance of health. Again we see diets recommended for increasing body weight, in which carbohydrates and fats are given in such preponderance that, often even the best of these diets give little attention to the regulation and maintenance of the protein requirements of the body. Furthermore, none of these diets with which I am familiar give proper attention to the acid base equilibrium.

In our critical appraisal of diets, however, we should not ignore those furnished or recommended by physicians. Only a short time ago, the meat-free, salt-free diet was very largely used in the treatment of certain kidney conditions, and the physician's instructions usually contained no advice adequate for the replacement of these articles in the diet. The individual under treatment was expected to use his own judgment in the matter, which frequently resulted in either the introduction of protein material, fully as injurious to kidney tissues as the meat which had been removed, or such a marked restriction of proteins that the body maintenance was not provided for adequately. Frequently diets have been devised and recommended containing large quantities of roughage, which have been introduced as a mechanical method of stimulating activity of the intestinal tract. That such diets have proved of great detriment is indicated by a recent statement made by an eminent gastro-enterologist that these roughage diets furnished not only the cake but, also, the bread and butter for the gastro-enterologist. A noted physician on the west coast recommended a diet consisting largely of fruit. He recommended citrous fruits so exclusively that the

charge was made that he was subsidized by the Fruit Growers' Association to present such propaganda.

As we review diet after diet, is it surprising that one should select as a theme "Diets Be Damned"? Is it not possible that we have gone too far in the matter of diet advice? Perhaps it is a matter of a little knowledge being dangerous, since I am convinced that the fully trained dietitian is not only a valuable adjunct to scientific medical management but is also an invaluable element in the proper management of certain cases. Whether we support the contention in its entirety or not, one can not help but feel that perhaps we might all have profited by hearing a talk on "Diets Be Damned".

HAY FEVER TREATMENT UNCHANGED

In a recent issue of the *Des Moines Register** there appeared an editorial dealing with a "new treatment" of hay fever, which has created much interest in the distribution area of this newspaper. The editorial stated that a method of treatment had been devised for hay fever which required no injections, with their resulting pain and discomfort, but provided for relief from this condition by the inhaling of a vapor having medicinal properties.

A careful search of the current medical literature failed to reveal any report of such a treatment and, for this reason, an attempt was made to determine the source of the editorial. We were advised that the information contained in the editorial was taken from a news story which appeared in the *New York Herald-Tribune*, which is considered among newspaper circles as being a most reliable source of news.

Investigation through the American Medical Association indicates that the treatment has not as yet reached a stage of maturity so that it can be reported to the public—in fact, doubt is expressed that a new treatment is being considered. It is thought that the treatment is probably a revival of those older iodine vapor treatments, with perhaps some modifications or additions.

Inquiry directed to the Murphy Memorial Laboratory for Hay Fever Research, which is credited with this discovery, brought forth the following reply:

June 13, 1932.

My dear Sir:

We are not prepared at the present time to issue any information of a definite character until such time as the series of treatment that we are now conducting will have been completed. At such time publication will be made in reputable medical journals, giving complete data regarding the clinical

*Edition of June 2, 1932.

composition of the vapor and its method of application.

Regretting that we can not be of more service to you at the present time, we are

Sincerely,

Dr. A. H. Zifferblatt.

From the investigation which we have made, we are led to believe that the editorial appearing in the New York *Herald-Tribune* and that quoted by the Des Moines *Register* was untimely. Such pseudoscience does much to disturb the equanimity of those individuals who have in the past secured relief by receiving a suitable series of pollen injections prior to the hay fever season. Some such patients have already expressed themselves as being unwilling to undertake the injection treatment this year, since they hoped that they would be able to secure this new exploitation. At the present time, it would seem that the best that could be said for the new treatment is that it is in the experimental stage and that it is quite unlikely that, even should it demonstrate merit, that it will be available for use by hay fever sufferers during the present hay fever season.

THE COUNTRY DOCTOR

This theme has been a favorite one with many writers. It obviously lends itself, even in exact portrayal, to the melodramatic. Medical history is replete in the description of outstanding country physicians, and many of our most splendid discoveries have been the work of the country doctors. Up to the present time, radio broadcasting has not sponsored any commercial programs recognizing the sterling qualities of the medical physician. It is true that in many instances the broadcast has been used for the dissemination of medical information and problems dealing with public health. So far as we know, the program entitled, "The Country Doctor," by Phillip H. Lord, famous as the Seth Parker of the National Broadcasting Company, for the first time directs favorable attention to the medical profession and pays tribute to medical men of all classes and, particularly, to those who minister to the ills of millions in the rural communities throughout the country. This new program was heard for the first time on Monday, June 20th, at 10:00 P. M. New York time over WJZ and the nation-wide NBC "blue network." The programs are fifteen minutes in length and are broadcast each Monday, Tuesday and Wednesday night.

Mr. Lord has named his character Dr. Matthews, a kindly, gentle physician who might be found practicing in any of the thousands of small towns which dot the nation from coast to coast. He is skilled in the practice of his profession and

shrewd in his judgment of his neighbors. He is tolerant when he can be and stern when he must be, and in his daily routine plays the role of brother, counsellor and friend.

As Mr. Lord pictures him, his suit may need pressing, his office may be crying for the touch of an orderly hand and his bank balance might be better for the assistance of someone to collect his fees for him, but he is always ready, always efficient and always calm. He is solid rock, part scientist, part philosopher and part priest, and around him in fair weather and in storm sweep the waters of his community life.

This broadcast is almost a one man show for Mr. Lord, since he has originated the character and written the scripts and will himself play the part of the doctor. In commenting on the new broadcast, he is reported to have said that the background for this character study began in his boyhood. The country doctor who brought him into the world became his ideal and he saw him at work and knew him as a friend. As he grew older, he often accompanied this physician on his visits to his patients. The things he saw and heard were stored up in his memory, and it is upon this remembrance that he now draws to give life to his radio character.

Since these programs are the outgrowth of a contact which promoted respect and esteem and, since Mr. Lord in his past characterizations has been so faithful to his ideals, we must believe that this new series of broadcasts commanding so largely the public interest will contribute in a very large measure to maintaining and establishing esteem for the practitioner in every locality.

NORMAN BAKER—POLITICIAN As Iowa News-Editors See Him

While commanding front page space for weeks during the sensational exposure of his cancer hospital in Muscatine last year, Norman Baker, now eluding arrest upon a warrant charging him with conspiracy to violate the state medical practice act, even when he announces his intention to become a candidate for governor of Iowa, must be content with inside space in most news organs. During the past few weeks he has broken into the news on some four or five separate counts but none have created more than casual interest. Denied retrial in his suit charging slander against the American Medical Association, Baker must forego not only the vindication of his character which he sought, but also the half million of dollars which he felt his injured name was worth. Restrained from the practice of medicine in Iowa without license it became necessary for Baker to allegedly

lease his properties, but the state now claims and seeks to prove that he has continued to violate the laws of the state which prevent any but a licensed medical practitioner from prescribing medical treatment for patients. The Attorney-General's office secured a warrant for Baker's arrest but has been unable to serve the paper since it has developed that Baker, about the time the warrant was issued, decided to reside in Old Mexico just over the border from Laredo, Texas, his forwarding address for mail. According to the *Muscatine Free Press* (Norman Baker owned) Baker is in Mexico for the purpose of erecting a radio broadcasting station which will be "larger than any three in the world". According to Lawyer J. C. France, who acted as Baker's attorney in his unsuccessful suit against the American Medical Association, we learn that Baker has "absconded" and that "he is about to remove permanently from the state and is about to dispose of his property with intent to defraud his creditors". (*Ledger*, Fairfield, Iowa, May 28th.) The court presumably recognized this claim in granting Lawyer France attachment on Baker's Muscatine properties to protect fees for legal services in the amount of \$2,958.

Lacking materially in the essential "trappings" and "stage setting" which proved such a strong card for Brinkley of Kansas in his whirlwind campaign for governor last year, Baker has announced from his headquarters in Nuevo Laredo, Mexico, his intentions of becoming an independent candidate for governor of Iowa. The International News Service released a news story on June 16th which stated:

"Norman Baker, former owner of a cancer clinic in Muscatine, Iowa, announced here today that he will be an independent candidate for governor of Iowa in the general election in November. Baker, who is classed in Iowa as a fugitive from justice, lived here several weeks. He is constructing a radio station which, he said, he will use in his campaign."

The most interesting angle perhaps of this announced candidacy of Baker for the chair of governor is the editorial comment in many of the newspapers over the state. The following quoted editorials are fair samples of the many which were printed:

In the *Marshalltown Times-Republican* of June 17th under the caption, "Have We Come to This?" Editor Moscrip writes: "Norman Baker of cancer cure notoriety sends announcement from 'somewhere in Mexico' that he will be an independent candidate for the governorship. It is getting so nothing astonishes in Iowa politics.

There is something humiliating in that announcement. * * * Perhaps it's a joke. But Iowa politics are being made ridiculous. A state ridiculously silly in politics becomes a laughing stock."

An editorial appearing in the *Burlington Gazette* of June 16th under a title of "By Remote Control" senses humor in the candidacy of Baker. "He holds the Iowa record for suing and being sued. He figures if he can collect all the judgments he seeks against others, he can balance his budget by paying all the judgments against him. Whether this will be part of his platform is problematical. At any rate, Mr. Baker's entry into the gubernatorial race will be interesting. He will enjoy one advantage over the other candidates. He cannot be heckled if he remains in Mexico."

In the *Atlantic News* of May 28th, prior to Baker's announcement, in an editorial entitled "The Mills of the Gods," we find this comment: "Not only was Baker a menace in the operation of his institute, but he was also a menace as regarded his influence on the minds of many people inclined to follow a political faker and charlatan. So insidious was this influence that at one stage of the proceedings it was seriously feared he might be a candidate for governor."

The *Boone Republican* of June 17th editorially comments: "A new element of fun is scheduled to enter the Iowa election campaign this fall. Norman Baker, famous, or infamous if you prefer, operator of the Baker hospital in Muscatine, has announced that he will run for governor on an independent ticket in November. * * * The Baker platform as he announces it, promises a 'clean' administration, free from cliques. He assures Iowa voters that he will not be intimidated by anyone if he is elected, but will stand entirely on his own feet. Most Iowans are inclined to believe that those feet are even more clayey than is usual."

An editorial in the *Vinton Times* of June 16th believes Baker's announcement merely another method of keeping himself before the public—"And so Norman Baker gets back into the news columns. The erstwhile cancer cure specialist and radio ballyhooper, now a fugitive from Iowa justice in Mexico, is reported to have announced at Nuevo Laredo, his present hanging-out place, that he will be an independent candidate for governor of Iowa in the fall election. He's probably bluffing, but if he is sincere he will find there are still enough Bakerites in Iowa to give him a sizeable vote. Barnum, gentle reader, will again be vindicated."

How pointed are the remarks of the editor in the *Times-Republican*, Marshalltown, of June

16th and again on June 17th respectively: "Norman Baker announces his independent candidacy for governor of Iowa from Nuevo Laredo, Mexico. He should bring along Goat Gland Brinkley as his campaign manager. Will he gets votes? He will. One of Brinkley's goats could get votes in Iowa nowadays. * * * Tilton, the Clinton cancer faker, has been convicted of conspiracy to defeat the general medical practice law. Now he should hurry back to Iowa and run for governor hand in hand with Baker."

The Ottumwa *Courier* of June 17th editorially view's Baker's announcement as "Always Ridiculous":

"Of all the ridiculous things Norman Baker has done—and there have been many of them—the one which capped the climax was his announcement Thursday that he would run for governor of Iowa on an independent ticket, using his radio station in Mexico as his campaign mouthpiece.

"In this connection it is interesting to note the statement from the attorney-general's office that there is a warrant out for Mr. Baker's arrest on a charge of violating the injunction which forbade him to operate the Baker institute at Muscatine, and that he will be arrested if he returns to the United States.

"Wouldn't it be the height of something or other to vote for a fugitive from justice for chief executive of the state? Even if he were elected as a result of his 'remote control' campaign, he couldn't take office because the arm of the law would pick him up before he got to the capital city.

"Anyway, his candidacy will help brighten up the campaign, for who knows what he might do next? Not you, not I, and probably not even Mr. Baker."

THE PREVENTION AND CONTROL OF VENEREAL DISEASES

A report of considerable interest recently submitted to Congress by Surgeon-General H. S. Cumming deals with the prevention and control of the venereal diseases. During the fiscal year recently ended, the state health officers of 43 states reported to the Public Health Service slightly more than a quarter of a million cases of syphilis and more than 150,000 cases of gonorrhea. These diseases as a class continued to exceed the number of cases reported during the year of any other single communicable disease with the exception of measles.

The malaria treatment of general paralysis of the insane is now generally considered the most

effective treatment of this condition. As a result the Public Health Service receives each year an increasing number of requests for infected mosquitoes for inoculation purposes. Plans are now under way to supply this need and to make further studies of this method of treatment in cooperation with various institutions where it is being applied.

Increasing importance is being attached to the early diagnosis and treatment of syphilis. The possibility of extending to rural and remote districts the advantages to be derived from early diagnosis by means of microscopic examination were studied and one method was worked out. This method has been tested by other observers and at present is in operation by one state health department and is under consideration by others.

A special study of syphilis among negroes in rural areas in cooperation with state and local health authorities, inaugurated in 1929 with the financial assistance of the Julius Rosenwald Fund, was extended to include areas in five other states. Serologic tests were done on 28,195 negroes, and of this number 5,785, or 20.5 per cent, were found syphilitic on the primary survey. Of these positive cases, approximately 75 per cent were placed on intravenous medication, and at the close of the year 45 per cent of them had received treatment in amount considered sufficient to render them non-infectious. It is unfortunate that the methods used cannot be applied to all classes of population.

A one-day census of the cases of venereal diseases taken in three cities shows marked variation in the relative incidence and prevalence of these diseases as observed in different localities. A re-survey of one entire state and of a number of communities originally studied in 1927, made in order to determine the trend of venereal diseases and the effect of the methods employed for their control during the three-year period, disclosed the significant point that in communities where increases in the prevalence rates were found they occurred in the group of chronic cases, an indication that patients are being treated for a longer time than formerly.

PHYSICIAN HEADS CHEMICAL WARFARE SERVICE

The chief of the Chemical Warfare Service of the United States Army is a physician, Major General Harry L. Gilchrist, a native of Iowa, graduate of the Medical School of Western Reserve University and honor graduate and medalist of the Army Medical School.

Minutes of the Iowa State Medical Society Eighty-first Annual Session

May 4, 5, 6, 1932—Sioux City

Wednesday Morning Session, May 4, 1932

The opening session of the Eighty-first Annual Session of the Iowa State Medical Society, held at the Masonic Temple, Sioux City, May 4-6, 1932, convened at eight-fifteen o'clock, President Channing Smith presiding.

Invocation by Reverend George C. Pullman, First Congregational Church, Sioux City.

Addresses of welcome by Mr. Jefferson, representing Mayor W. D. Hayes, and Dr. Edwin C. Cobb, representing the Woodbury County Medical Society. Response by Dr. J. Fred Clarke, Fairfield.

In the scientific session Dr. Henry L. Ulrich, Minneapolis, Minnesota, conducted a Medical Clinic, and Dr. Dean D. Lewis, Baltimore, Maryland, conducted a Surgical Clinic.

The following papers were presented:

"Significant Laboratory Tests for the General Practitioner," by Dr. Mary H. Swan, Chicago, Illinois.

"Hypertensive Kidney Disease," by Dr. Walter Cary, Dubuque.

"Tuberculosis of the Kidney," by Dr. James C. Donahue, Centerville.

"Perinephritic Abscesses," by Dr. Ray A. Fox, Charles City.

"Glomerulonephritis," by Dr. John L. Kestel, Waterloo. This paper was read by Dr. Harry P. Moen, West Union, in the absence of Dr. Kestel who was ill.

The discussion on Dr. Swan's paper was opened by Dr. Howard L. Van Winkle, Cedar Rapids; closed by Dr. Swan.

The discussion on the papers by Drs. Kestel and Cary was opened by Dr. Harry P. Moen, West Union; closed by Dr. Cary.

The discussion on the papers by Drs. Donahue and Fox was opened by Dr. Con R. Harken, Osceola. No closing discussion.

The meeting adjourned at twelve-ten o'clock.

Wednesday Afternoon Session, May 4, 1932

The second scientific session convened at one-thirty p. m., President Smith presiding.

The Address in Medicine, "Pulmonary Arteriosclerosis—A New Clinical Triad," was given by Dr. Henry L. Ulrich, Minneapolis.

The following papers were presented:

"Present Day Knowledge of Blood Cell Formation and Pathology," by Dr. Hal Downey, Minneapolis.

"Indications for Splenectomy," by Dr. Alfred A. Eggleston, Burlington.

"Anemias in Children," by Dr. James E. Dyson, Des Moines.

"The Significance of Blood Findings in Surgical Conditions," by Dr. Chalmers A. Hill, Council Bluffs.

The discussion on Dr. Eggleston's paper was opened by Dr. Sidney D. Martin, Carroll.

The discussion on Dr. Dyson's paper was opened by Dr. Bennett A. Melgaard, Sioux City.

General discussion by Drs. Hal Downey, Minneapolis; Charles T. Maxwell, Sioux City; F. L. Nelson, Ottumwa; E. H. Boyer, Clinton; W. R. Brock, Sheldon. Closing discussion by Drs. Dyson and Hill.

A summary was presented by Dr. Ulrich.

President Smith announced the sudden illness of President-Elect Eiker. Upon motion made by Dr. William A. Rohlf, Waverly, regularly seconded, it was voted that a committee be appointed to take the felicitations and best wishes of the Iowa State Medical Society to Dr. Eiker, and also that a bouquet of flowers be sent.

The following were appointed as a committee to visit President-Elect Eiker:

Dr. Tom B. Throckmorton, Des Moines.

Dr. William A. Rohlf, Waverly.

Dr. F. E. Bellinger, Council Bluffs.

The meeting adjourned at four-forty o'clock.

Thursday Morning Session, May 5, 1932

The third scientific session convened at eight-thirty o'clock, President Smith presiding.

A Surgical Clinic was conducted by Dr. Dean D. Lewis, Baltimore.

A Medical Clinic was conducted by Dr. Henry L. Ulrich, Minneapolis.

The following papers were presented:

"Clinical Neurology and the General Practitioner," by Dr. Tom B. Throckmorton, Des Moines.

"Indications for Sympathectomy in Angina Pectoris," by Dr. Walter D. Abbott, Des Moines.

"Psychoses of Pregnancy," by Dr. Roy E. Crowder, Sioux City.

"Present Status and Treatment of Syphilis in the Adult," by Dr. Charles C. Collester, Spencer.

The discussion on Dr. Throckmorton's paper was opened by Dr. Clarence E. Van Epps, Iowa City.

The discussion on Dr. Abbott's paper was opened by Dr. B. Raymond Weston, Mason City.

A discussion on Dr. Crowder's paper, prepared by Dr. Robert A. Stewart, Independence, was read by Dr. Robert N. Larimer, Sioux City.

The discussion on Dr. Collester's paper was opened by Dr. John M. Pope, Cherokee, and continued by Dr. Murdoch Bannister, Ottumwa.

General discussion by Dr. Christian B. Luginbuhl, Des Moines.

Closing discussion by Drs. Throckmorton, Abbott and Crowder.

The meeting adjourned at twelve o'clock.

Thursday Afternoon Session, May 5, 1932

The fourth scientific session convened at one-thirty o'clock, President Smith presiding.

The Address in Surgery: "Fundamental Knowledge of Cancer," was given by Dr. Dean D. Lewis, Professor of Surgery, Johns Hopkins Medical College, Baltimore.

The following papers were presented:

"Early Diagnosis of Cancer of the Stomach," by Dr. Colin G. Thomas, Monticello.

"Diagnosis of Carinoma of the Stomach," by Dr. Harry R. Jenkinson, Iowa City.

"Diagnosis of Carcinoma of the Lip," by Dr. Nelson M. Whitehill, Boone.

"The Rational Management of Tumors of the Breast," by Dr. Thomas J. Irish, Forest City.

"Diagnosis of Carcinoma of the Rectum," by Dr. Carl G. Bretthauer, Holstein.

Address, "Cancer of the Larynx," by Dr. William V. Mullin, Cleveland, Ohio.

Discussion on the above papers was opened by Dr. William Jepson, Sioux City, continued by Dr. Con R. Harken, Osceola.

A summary was given by Dr. Dean D. Lewis, Baltimore.

There was no closing discussion by the essayists.

The meeting adjourned at four-thirty o'clock.

Friday Morning Session, May 6, 1932

The fifth scientific session convened at eight-forty-five o'clock, First Vice President Sawyer presiding.

The following papers were presented:

"Control of Diphtheria and Smallpox in Iowa," by Dr. Martin D. Ott, Davenport. Discussed by Dr. Howard A. Lanpher, Des Moines.

"The Medical Section of the Iowa Conference on Child Health and Protection," by Dr. Fred Moore, Des Moines.

"Physical Diagnosis in Children," by Dr. Robert H. McBride, Sioux City.

"Diagnosis of Childhood Tuberculosis," by Dr. Chester A. Stewart, Minneapolis.

"Cerebral Hemorrhage of Newborn," by Drs. Everett D. Plass and Phillip C. Jeans, Iowa City.

The discussion on Dr. Stewart's paper was opened by Dr. John H. Peck, Des Moines, continued by Dr. W. R. Brock, Sheldon, and closed by Dr. Stewart.

"Nutrition and Dental Caries," by Dr. Julian D. Boyd, Iowa City. Discussion by Drs. Anton J. Carlson, Chicago, and Emil C. Junger, Soldier, and closed by Dr. Boyd.

"Child Health and Protection: The Physician's Responsibility," by Dr. Anton J. Carlson, Chicago.

The report of the House of Delegates was made by Secretary Parker.

The meeting adjourned at twelve o'clock.

Transactions House of DelegatesIowa State Medical Society, Eighty-first Annual Session
May 3, 4, 5, 6, 1932—Sioux City

The House of Delegates of the Iowa State Medical Society met in the Auditorium of the Masonic Temple, and was called to order by President Smith at 1:30 p. m.

The President announced that there would be no roll call unless requested by a member, and that a majority of the registered delegates would constitute a quorum.

Registration showed the presence of 17 officers, 52 delegates and 8 alternates, a total of 77.

The Secretary, Dr. Robert L. Parker, asked for a motion approving the minutes of the Friday morning session of 1931, as printed in the July, 1931, issue of the Journal of the Iowa State Medical Society. Dr. O. J. Fay so moved. Motion was seconded and carried.

Before proceeding to the regular order of business, the President asked Dr. Fay to make an announcement. Dr. Fay explained the provision in the by-laws of the American Medical Association requiring that the names of state society delegates be in the

hands of the Secretary of the American Medical Association seven days prior to the meeting of the national House of Delegates; as well as the provision in the by-laws of the Iowa State Medical Society permitting the Board of Trustees to fill vacancies. The Board of Trustees did not wish to name the delegates of the Society, and permission had been received from the Secretary of the American Medical Association to delay the certification of the State Society delegates, if made the first order of business of the session. Dr. Fay moved that Dr. T. F. Thornton, of Waterloo, and Dr. E. D. Plass, of Iowa City, be named as delegates to the American Medical Association for a two-year term. The motion was seconded by Dr. C. A. Boice. There being no further nominations, the motion carried unanimously.

Dr. Fay moved that Dr. F. J. Swift, of Maquoketa, and Dr. George M. Crabbe, of Mason City, be named as alternate delegates to the American Medical Association. The motion was seconded by Dr. Walter E. Baker and carried unanimously.

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:

The following report for the year 1931-1932 is respectfully submitted:

The past year has been marked by increased interest and activity throughout the entire society. State officers have had exceptional demands upon their time and a corresponding opportunity to serve the society and the various component units. With few exceptions, the county officers throughout the state have been most active and have cooperated with the state officers in a way that has promoted both unity and efficiency. The membership as a whole has taken greater interest in the problems of organized medicine and the activities of the state society than ever before. Numerous district and county meetings, actions taken by county societies, communications in the JOURNAL and correspondence with members are indicative of this awakened interest and activity.

While there have been some pointed negative criticisms and some questioning of the increased dues, yet the net result has been an enlightened and interested membership. In the fall of 1931, the president and secretary and other officers of the state society attended district meetings in every district except the eighth, where the Councilor held two meetings for the convenience of the various county officers. Since then, general meetings have been held in the following districts: the eleventh district, at Council Bluffs, on March 10; the sixth district, at Marshalltown, on March 23; and the tenth district, at Creston, on March 29. Altogether, the officers of the state society have since May 1 of last year been called upon to attend 29 meetings. In every case the purpose was to discuss the program and activities of the state society. Your secretary feels that such demand for information about the Iowa State Medical Society is proof that our organization is in a sound and healthy condition and that there prevails that unity and interest which alone can bring success to our great undertakings.

The financial statement which the constitution and by-laws require the secretary to make annually to the House of Delegates is presented completely and in detail in the audit made by a certified public accountant and submitted herewith. Attention should be called to the fact that this report includes a detailed statement for each check, and that in the last column there is shown the activity, committee or officer to which the expense was charged.

Dues, despite the severe effect of the current business conditions upon the income of Iowa physicians and despite the increase in dues, have come in at about the normal rate during the early months of 1932. With 2,000 paid memberships on April 20th, there is every indication that the total of paid memberships by the time of the annual session will be

substantially the same as on previous years at the same date.

One effect of the financial stringency and increased dues has been to direct the attention of various county societies to certain of their members who fully deserve honorary life membership in the county and state societies. It is apparently the purpose of the constitution and by-laws to afford life membership in the state society in either of two ways: by virtue of thirty years of continuous membership in the state society, or by unanimous vote of the House of Delegates upon recommendation by a component county society. Life membership by the former method is not possible because of the fact that the membership records of the Iowa State Medical Society do not completely cover the preceding thirty years. Your secretary would therefore urge that each county society which has within its membership worthy and deserving physicians who by length of service and affiliation with organized medicine deserve the high honor of life membership, should be voted such membership by the county society and recommended to the House of Delegates for life membership in the state society. Formal notice of such election by the county society and request for life membership to be voted by the House of Delegates has been received by the secretary of the state society for the following physicians: Dr. A. J. Cole, of Cerro Gordo county; Dr. Clara L. K. Cronk and Dr. H. C. Finch, of Davis county; Dr. George Hofstetter, of Clinton county, and Dr. F. S. Smith, of Story county.

Despite certain difficulties and criticisms which are naturally inherent in any active and growing organization, your secretary has enjoyed the privilege of serving the Iowa State Medical Society during the past year and submits this report with the feeling that in general a fine spirit of fellowship, interest and unity prevails throughout the profession in Iowa.

Respectfully submitted,
Robert L. Parker, Secretary.

The Secretary, Dr. Robert L. Parker, moved that his report be accepted as printed in the handbook. The motion was seconded.

Dr. S. T. Gray asked permission to read a letter, dictated by Mr. Blank, executive secretary of the Council and managing director of the Iowa State Medical Society, dated at Albia, Iowa, December 13, 1931, and signed by three Monroe County physicians, Drs. Frank N. Bay, T. E. Gutch and G. A. Jenkins. Dr. Gray then read an excerpt from a notice of withdrawal from the Monroe County Medical Society, Incorporated, signed and sworn to by Drs. Bay, Gutch and Jenkins.

Dr. Gray moved to amend the original motion as follows: that the House of Delegates do not approve the action of Mr. Blank in dictating and sending out from the state secretary's office the aforementioned letter. The motion was seconded by Dr. E. C. McClure. Dr. Gray outlined the history of the Monroe County society controversy.

Dr. T. A. Burcham asked if the three physicians had resigned from the county society before or after

the society's incorporation. Dr. Gray replied that they had resigned after the incorporation. Dr. Burcham asked what reasons they had given for their resignation. Dr. Gray replied that their reason had apparently concerned a liability clause in the articles of incorporation.

Dr. A. W. Erskine asked Dr. Gray if the resignation of the three physicians had been from the chartered Monroe County Medical Society, or from the Monroe County Medical Society, Incorporated. Dr. Gray then read the resignation.

Dr. Erskine then asked Dr. Gray if his reason for bringing the matter before the House of Delegates was based upon his statement that the three men do not belong to any County Medical Society. Dr. Gray replied that they do not belong to the Monroe County Medical Society.

Dr. Erskine rose to a point of order and stated that the matter was disputable whether the three belonged to any county medical society; and whether there were two county medical societies in Monroe County. He quoted Chapter XII, Sec. 4 of the by-laws: "Only one component medical society shall be chartered in any county. Where more than one county medical society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the district if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council which shall decide what action shall be taken." Dr. Erskine stated that an appeal had been made; and moved that the matter be referred to the Council. Dr. Erskine then withdrew his motion and made it a point of order that the question should be a matter for the Council to decide.

Dr. McClure stated that the point which Dr. Gray wished to bring out was that the managing director should not have written the letter purporting to be from the three Monroe County physicians.

The President stated that the matter was not a question of ethics; that it was an attack upon the managing director of the State Society; and that the point of order was ruled out.

Dr. L. R. Woodward, Chairman of the Council, stated that there were many constructive matters awaiting the action of the House of Delegates; that much valuable time should not be consumed on a personal issue involving thirteen men in one county society; that these men had had numerous opportunities for hearings before the Society. He stated that the letter purporting to be from the three physicians must be judged in its setting, rather than as a single item, that a letter had been circulated by the delegate from Marion County, followed by the circulation of resolutions of an inflammatory nature from the ninth district; that the matter was one for the consideration of the Council. Dr. Woodward pointed out that the President had labored indefatigably during the entire year to produce harmony, and urged the House to consider the matters before it without malice and without personal jealousy.

Dr. Fred Moore moved that the amendment to the original motion be tabled. The motion was seconded.

Upon further discussion by Dr. McClure, Dr. Moore rose to a point of order and stated that a motion to table was not debatable. Dr. Gray stated that a motion to table was debatable by the member making the motion. The President ruled the discussion out of order, and read the amendment to the original motion. Upon vote, the motion to table carried.

The President put the original question, and the motion carried to accept the Secretary's report.

The Secretary made the following supplementary report:

House of Delegates, Iowa State Medical Society:

At our last annual session I reported 2,046 paid members. Although today's report is being made one week earlier than last year's, I am pleased to report 2,076 paid members to date, an increase of 30. In the figures for both years are included 16 life members.

The total cash receipts from membership for the first four months—January to May—were \$24,433.50, making our total net worth of May first \$46,633.23, a gain of \$8,706.34 over May 1, 1931.

These remarkable results, in the face of the increased dues and despite the depression, were achieved only by and through exceptional interest, activity and loyalty on the part of the county society secretaries. This is not only a monetary but a positive proof of the marked enthusiasm, harmony and cooperation which characterize the Iowa State Medical Society as it enters upon its eighty-second year.

Robert L. Parker, Secretary.

Dr. Parker moved that his supplementary report be accepted. The motion was seconded and carried.

The President called for a motion to receive the remaining reports as printed in the handbook. Dr. I. K. Sayre moved that the House of Delegates receive the remaining reports as printed in the handbook. The motion was seconded and carried.

REPORT OF THE TREASURER

House of Delegates, Iowa State Medical Society:

The complete report of the fiscal transactions of the Society for the calendar year 1931 and of the financial condition of the Society as of December 31, 1931, will be found in the auditor's report which is presented in its entirety herewith. (See pages —.)

Exhibit B shows that the total expenditures for the year were \$37,523.40 and that the total income of the Society for the year 1931 was \$33,369.23, plus a profit of \$1,546.53 on the exchange of Liberty Bonds for new Treasury Bonds. The various sources of income are shown in Exhibit B; and Schedules 1 and 2 show the detailed expenditure with a separate itemized listing of each check as drawn by the Treasurer upon order of the President and Secretary, after having been approved by the Board of Trustees. During the year 1931 expenditures exceeded income by \$4,154.17. The net worth of the Society at the end of the period was \$31,879.50.

Further discussion of the various items of income and expenditure are unnecessary in this report, as they are fully covered in the reports of the Secretary and the Trustees.

Respectfully submitted,
E. B. Winnett, Treasurer.

AUDITOR'S REPORT

December 31, 1931

January 13, 1932

Dr. Oliver J. Fay, Chairman,
Board of Trustees,
Iowa State Medical Society,
Des Moines, Iowa.

Dear Sir:

In accordance with your instructions, we have examined the books and records of the

IOWA STATE MEDICAL SOCIETY
DES MOINES, IOWA

for the year ended December 31, 1931, and submit herewith our report thereon, together with the following statements:

Exhibit "A"—Cash Account for the Year Ended December 31, 1931

Exhibit "B"—Income and Investment Account for the Year Ended December 31, 1931

Schedule No. 1—Expenditures for the Year Ended December 31, 1931

Schedule No. 2—Expenditures for the Year Ended December 31, 1931 (Speakers Bureau)

The following comments are made on the principal items included in the accompanying Exhibits.

CASH ACCOUNT

Exhibit "A" sets out in detail the receipts and disbursements to the various bank accounts, a summary of which is shown below:

Cash in all banks, January 1, 1931.....	\$ 9,649.14
Add: All Receipts.....	33,369.23
Total.....	\$43,018.37
Less: Expenditures.....	37,523.40

Balance Cash in All Banks, December 31, 1931.. \$ 5,494.97

All recorded cash receipts were traced to the Society's bank accounts, and likewise transfers to and from the respective funds.

Schedule No. 1 sets out in detail the expenditures for the year ended December 31, 1931 for the Society proper, aggregating a total of \$35,052.06, and Schedule No. 2 sets out the expenditures of the Speakers Bureau for the year ended December 31, 1931 aggregating a total of \$2,471.34. All of these expenditures in Schedule No. 1 and 2, respectively, were supported by checks drawn by the Treasurer, Dr. E. B. Winnett, upon vouchers issued by the Secretary, Dr. Robt. L. Parker. Attached to and supporting the vouchers were invoices from the respective creditors, duly approved by the Board of Trustees, of which Dr. O. J. Fay is Chairman. Invoices supporting vouchers for the latter part of November and for December have only been approved by the Chairman of the Board of Trustees by reason of the fact that there has been insufficient time in which to complete the regular course of procedure. The aforesaid invoices, however, were accepted in accordance with the following resolution, passed by the Board of Trustees on May 23, 1930:

"Moved by Dr. Harkness, seconded by Dr. Myers, that regular bills, fixed salaries, rent and other items for which the Board had contracted and especially where discounts were allowed, should meet the approval of the Board when signed by the Chairman, the same to be submitted at the next regular meeting for signature of the other trustees. Motion carried."

Vouchers of the Speakers Bureau were also approved by the Chairman of this Bureau, Dr. D. J. Glomset.

All cancelled checks, vouchers and invoices supporting same were submitted for our inspection as set out in Schedules No. 1 and 2, respectively.

The various bank accounts were satisfactorily reconciled with the books of account and verified by direct communication with the various depositories.

During the year under review the Fourth Loan Liberty Bonds that were on hand January 1, 1931 (face value \$25,000.00) were sold at a profit of \$1,546.53 including accrued interest thereon, and New Treasury Bonds were purchased for \$26,384.53, with a face value of \$25,500.00. This information was secured from a letter submitted to us, written by Mr. R. L. Chase, Vice President of the Iowa-Des Moines National Bank and Trust Company of Des Moines, Iowa, to Dr. E. B. Winnett, Treasurer of the Iowa State Medical Society, under date of May 21, 1931, which was approved by the Board of Trustees. We further verified the bonds on hand at December 31, 1931, by actual inspection of same at the Iowa-Des Moines National Bank and Trust Company where they are held in safe keeping.

Exhibit "B" sets out the income and expenditures for the year ended December 31, 1931, resulting in an excess of expenditures over income of \$4,154.17, summarized as follows:

Total All Income for the Year.....	\$33,369.23
Less: Total Expenditures.....	37,523.40

Excess Expenditures Over Income....	\$ 4,154.17
Less: Profit on Sale of Fourth Loan Liberty Bonds during period under review.....	1,546.53

Total Net Loss for Year Ended December 31, 1931.....	2,607.64
Cash in Banks and Cost Value of Bonds on Hand January 1, 1931.....	34,455.91
Excess Cost of New Bonds Over Sale of Old.....	31.23

Balance Cash in Banks and Cost Value of Treasury Bonds on Hand December 31, 1931.....	\$31,879.50
---	-------------

Represented by:

Treasury Bonds on Hand (Face Value \$25,500.00)	
Cost.....	\$26,384.53
Secretary's Account, Bankers Trust Company..	203.45
Treasurer's Account, Iowa-Des Moines National Bank (Overdraft).....	361.15
Savings Account, Des Moines Savings Bank and Trust Co.....	1,434.67
Secretary's Account, Speakers Bureau, Bankers Trust Co.....	4,030.30
Secretary's Account, Speakers Bureau, Iowa-Des Moines National Bank.....	187.70
Total.....	\$31,879.50

In addition to the bonds and cash in banks as previously shown herein, the Society owns furniture and fixtures used in the Secretary's office which has been purchased from time to time and charged as an expense in the respective years. The value of these items is not shown herein.

We wish to take this opportunity of expressing our appreciation to those who extended courtesies during our examination, and we shall be glad to supply any additional information you may desire.

Respectfully submitted,

W. WIDDUP & COMPANY,
Certified Public Accountants,
Chartered Accountants.

Exhibit "A"
Cash Account
For the Year Ended December 31, 1931

	Total	Secretary's Account Bankers Trust Company	Treasurer's Account Iowa-D.M. Nat. Bank Checking Account	D. M. Savings Bank & Trust Co.	Speakers Secretary's Account	Bureau Treasurer's Account
BALANCE IN BANKS JANUARY 1, 1931..	\$ 9,649.14	\$ 156.90	\$ 218.02	\$ 6,494.22	\$ 2,780.00	\$ 0...
RECEIPTS:						
From Secretary:						
Dues.....	\$20,847.50	\$17,152.50	\$ 0...	\$ 0...	\$ 3,695.00	\$ 0...
Advertising (Net).....	7,863.09	7,863.09	0...	0...	0...	0...
Reprints.....	950.12	950.12	0...	0...	0...	0...
Miscellaneous.....	23.95	23.95	0...	0...	0...	0...
Travel Expense Refunds.....	214.34	0...	0...	0...	214.34	0...
Total from Secretary.....	\$29,899.00	\$25,989.66	\$ 0...	\$ 0...	\$ 3,909.34	\$ 0...
Interest:						
Interest from Liberty Bonds.....	\$ 959.22	\$ 0...	\$ 959.22	\$ 0...	\$ 0...	\$ 0...
Interest from Savings Account.....	190.45	0...	0...	190.45	0...	0...
Total Interest.....	\$ 1,149.67	\$ 0...	\$ 959.22	\$ 190.45	\$ 0...	\$ 0...
Other Receipts:						
Annual Session.....	\$ 2,092.00	\$ 0...	\$ 2,092.00	\$ 0...	\$ 0...	\$ 0...
Refund from Advance to G. Blake.....	228.56	0...	228.56	0...	0...	0...
Total Other Receipts.....	\$ 2,320.56	\$ 0...	\$ 2,320.56	\$ 0...	\$ 0...	\$ 0...
TOTAL RECEIPTS.....	\$33,369.23	\$25,989.66	\$ 3,279.78	\$ 190.45	\$ 3,909.34	\$ 0...
TOTAL RECEIPTS AND BALANCE.....	\$43,018.37	\$26,146.56	\$ 3,497.80	\$ 6,684.67	\$ 6,689.34	\$ 0...
TRANSFER OF FUNDS:						
From Secretary to Treasurer.....	\$ 0...	\$25,943.11	\$25,943.11	\$ 0...	\$ 2,659.04	\$ 2,659.04
From Savings Account.....	0...	0...	5,250.00	5,250.00	0...	0...
Total Transfers.....	\$ 0...	\$25,943.11	\$31,193.11	\$ 5,250.00	\$ 2,659.04	\$ 2,659.04
BALANCE AFTER TRANSFER.....	\$43,018.37	\$ 203.45	\$34,690.91	\$ 1,434.67	\$ 4,030.30	\$ 2,659.04
EXPENDITURES:						
As per Schedule Number 1.....	\$35,052.06	\$ 0...	\$35,052.06	\$ 0...	\$ 0...	\$ 0...
As per Schedule Number 2.....	2,471.34	0...	0...	0...	0...	2,471.34
Total Expenditures.....	\$37,523.40	\$ 0...	\$35,052.06	\$ 0...	\$ 0...	\$ 2,471.34
BALANCE IN BANK AS OF DECEMBER 31, 1931.....	\$ 5,494.97	\$ 203.45	\$ 361.15	\$ 1,434.67	\$ 4,030.30	\$ 187.70

Exhibit "B"
Income and Investment Account
For the Year Ended December 31, 1931

INCOME:		EXCESS EXPENDITURES OVER INCOME..	
Receipts from Secretary:			\$ 4,154.17
Dues.....	\$17,152.50	Less: Profit on Sale of Fourth Loan Liberty Bonds during the period under review for New Treasury Bonds (3½%).....	\$ 1,546.53
Advertising (Net).....	7,863.09	TOTAL NET LOSS.....	\$ 2,607.64
Reprints.....	950.12		
Miscellaneous.....	23.95	Cash in Banks and Liberty Bonds on Hand January 1, 1931 (At Cost).....	\$34,455.91
Total.....	\$25,989.66	Excess Cost of New Bonds Over Sale of Old.....	\$ 31.23
Speakers Bureau:		BALANCE CASH IN BANKS AND TREAS- URY BONDS ON HAND DECEMBER 31, 1931 (At Cost).....	\$31,879.50
Fees.....	\$ 3,695.00		
Travel Expense.....	214.34		
Total.....	\$ 3,909.34		
Interest from Liberty Bonds.....	959.22	REPRESENTED BY:	
Interest from Savings Account.....	190.45	Treasury Bonds 3½% (Face Value \$25,500.00) Cost.....	\$26,384.53
Annual Session Receipts.....	2,092.00	Cash in Banks as per Exhibit "A".....	5,494.97
Refund on Advance to G. Blake.....	228.56	Total.....	\$31,879.50
TOTAL INCOME As per Exhibit "A" ...	\$33,369.23		
EXPENDITURES:			
As per Schedule No. 1.....	\$35,052.06		
As per Schedule No. 2.....	2,471.34		
TOTAL EXPENDITURES.....	\$37,523.40		

Schedule No. 1

EXPENDITURES

For the Year Ended December 31, 1931

Date	Check	Order	Drawn in Favor of	Distribution	Amount	Charged to:
1931	No.	No.				
1-12	1132	3081	Grip Sales Company.....	Typewriter Cleaner.....	\$ 1.00	Rent and Office Supplies
1-12	1133	3082	Wallace-Homestead Co.....	Printing.....	34.50	Stationery and Printing
1-12	1134	3083	Bankers Building Corp.....	December Rent.....	107.00	Rent and Office Supplies
1-12	1135	3084	Central Engraving Co.....	Half Tones for Journal.....	12.38	Journal Printing and Engraving
1-12	1136	3085	N. W. Bell Telephone Co.....	Telephone Service.....	35.40	Legislative Committee (\$15.40), Medical Econ. Com. (\$5.00), Other Com. (\$15.00)
1-12	1137	3086	Iowa Press Clipping Bureau.....	November Clippings.....	12.15	Journal Printing and Engraving
1-12	1138	3087	Yunker Brothers.....	Framing Picture.....	3.25	Rent and Office Supplies
1-12	1139	3088	Old Dutch Carbon and Ribbon Company.....	Supplies.....	1.15	Rent and Office Supplies
1-12	1141	3089	Western Union Tel. Co.....	November Account.....	8.35	Trustees (\$5.00), Legislative Com- mittee (\$3.35)
1-12	1140	3090	Addressograph Co.....	Plates.....	1.01	Rent and Office Supplies
1-14	1142	3091	Mrs. Ula Manson.....	Committee on Medicine.....	6.00	Other Committees
1-14	1143	3092	Roscoe Jepson.....	Committee on Program.....	13.50	Annual Session
1-14	1144	3093	American Hosp. Ass'n.....	4 Copies 1929 Transactions.....	8.00	Other Committees
1-14	1145	3094	B. L. Eiker.....	Med. Ed. & Hosp. Comm.....	50.21	Other Committees
1-14	1146	3095	T. U. McManus.....	Med. Economics Comm.....	22.40	Medical Economics Committee
1-14	1147	3096	A. V. Hennessy.....	Med. Ed. & Hosp. Comm.....	90.24	Other Committees
1-14	1148	3097	A. W. Erskine.....	Med. Ed. & Hosp. Comm.....	2.00	Other Committees
1-14	1149	3098	Paul E. Gardner.....	Council Meeting.....	15.44	Council
1-14	1150	3099	F. A. Gillett.....	Meeting, Nurses Training.....	4.48	Other Committees
1-14	1151	3100	S. T. Grav.....	Council Meeting.....	6.40	Council
1-14	1152	3101	John I. Marker.....	Meeting Med. Econ. Comm.....	15.60	Medical Economics Committee
1-14	1153	3102	C. A. Boice.....	Council Meeting.....	8.21	Council
1-14	1154	3103	R. F. Childs.....	Meeting Med. Econ. Comm.....	7.74	Medical Economics Committee
1-14	1155	3104	C. S. Cornell.....	Meeting Med. Econ. Comm.....	3.72	Medical Economics Committee
1-14	1156	3105	Ira N. Crow.....	Nurses Training Comm. Mtg.....	8.40	Other Committees
1-14	1157	3106	Comm. on the Grading of Nurses' Schools.....	Literature.....	9.00	Other Committees
1-14	1158	3107	Vernon D. Blank.....	Traveling Expense.....	161.37	Rent and Office Supplies (\$16.33), Co. Soc. Services (\$125.04), Journal Printing (\$20.00)
1-14	1159	3108	Carpenter-Skilling Co.....	Printing Reports.....	805.84	Stationery and Printing (\$74.50), Other Committees (\$731.34)
1-14	1160	3109	Bankers Printing Co.....	Stamped Envelopes.....	129.55	Stationery and Printing
1-14	1161	3110	American Medical Ass'n.....	Reprints.....	20.00	Legislative Committee
1-14	1162	3111	Zaiser's.....	Office Supplies.....	31.80	Rent and Office Supplies
1-14	1163	3112	Hotel Fort Des Moines.....	Dinner for Councilors.....	9.00	Council
1-14	1164	3113	Western Letter Service.....	Multigraphing Letters.....	22.12	Stationery and Printing
1-14	1165	3114	Matthew Westrate.....	Baker Expenses.....	20.00	Administrative Miscellaneous
1-26	1168	3115	Vernon D. Blank.....	Traveling Expenses.....	121.50	Rent and Office Supplies (\$5.46), Co. Soc. Services (\$115.04)
1-26	1169	3116	N. W. Bell Telephone Co.....	January Service.....	61.10	Trustees (\$6.10), Legislative Com- mittee (\$30.00), Other Com- mittees (\$25.00)
1-26	1170	3117	Bankers Bldg. Corp.....	January Rent.....	107.09	Rent and Office Supplies
1-26	1171	3118	Dorothy McCarthy.....	Salary—January.....	100.00	General Salaries
1-26	1172	3119	Dorothy Nelson.....	Salary—January.....	100.00	General Salaries
1-26	1173	3120	Virginia Bennett.....	Salary—January.....	115.00	General Salaries
1-26	1174	3121	R. R. Simmons.....	Salary—January.....	125.00	General Salaries
1-26	1175	3122	Vernon D. Blank.....	Salary—January.....	500.00	General Salaries
1-26	1166	3123	Robert Hendersom.....	Bills of the 44th G. A.....	7.00	Legislative Committee
1-26	1176	3124	Edwin J. Frisk.....	Postage on Journal.....	100.00	Journal Printing and Engraving
1-26	1177	3125	A. V. Hennessy.....	M. E. & H. Committee.....	36.46	Other Committees
1-26	1178	3126	Western Letter Service.....	Multigraphing Letters.....	10.88	Stationery and Printing (\$5.43), Other Committees (\$5.45)
1-26	1179	3127	Iowa-Des Moines National Bank.....	Safety Box Rent.....	8.26	Administrative Miscellaneous
1-26	1180	3128	E. M. Myers.....	Trustees Meeting.....	3.77	Trustees
1-26	1181	3129	Gordon F. Harkness.....	Trustees Meeting.....	19.60	Trustees
1-26	1167	3130	Thos. A. Burcham.....	Honorarium.....	500.00	Legislative Committee
1-26	1182	3131	Zaiser's.....	Office Supplies.....	9.65	Rent and Office Supplies
1-26	1183	3132	Central Printing & Engr.....	Halftones.....	220.00	Other Committees
1-26	1184	3133	Dutcher, Walker & Rice.....	Medico-Legal.....	156.10	Medico-Legal
1-26	1185	3134	Wallace-Homestead Co.....	Journal Reprints.....	1,094.46	Stationery and Printing (\$43.57), Journal Printing (\$1,050.89)
1-26	1186	3135	Direct Advertising Co.....	Letters.....	134.92	Legislative Committee (\$71.99), Other Committees (\$62.93)
2-6	1187	3136	A. E. Bergman.....	Envelope Sealer.....	3.62	Rent and Office Supplies
2-25	1188	3137	Des Moines Club.....	Program Comm. Dinner.....	17.90	Annual Session
2-25	1189	3138	Bankers Bldg. Corp.....	February Rent.....	107.30	Rent and Office Supplies
2-25	1190	3139	Dorothy McCarthy.....	February Salary.....	100.00	General Salaries
2-25	1191	3140	Dorothy Nelson.....	February Salary.....	115.00	General Salaries
2-25	1192	3141	Virginia Bennett.....	February Salary.....	125.09	General Salaries
2-25	1193	3142	R. R. Simmons.....	February Salary.....	125.00	General Salaries
2-25	1194	3143	Vernon Blank.....	February Salary.....	500.00	General Salaries
2-25	1195	3144	Dorothy Tam.....	Extra Work.....	41.75	General Salaries
2-25	1196	3145	Old Dutch Carbon Co.....	Office Supplies.....	10.15	Rent and Office Supplies
2-25	1197	3146	N. W. Bell Telephone Co.....	February Service.....	61.02	Trustees (\$5.00), Council (\$6.02), Legislative Committee (\$50.00)
2-25	1198	3147	Joseph & Sons.....	Engraved Gavel.....	30.00	Annual Session
2-25	1199	3148	Western Union Tel. Co.....	January Account.....	8.21	Trustees (\$1.21), Legislative Com- mittee (\$7.00)
2-25	1200	3149	Iowa Press Clipping Bureau.....	January Clippings.....	22.60	Journal Printing and Engraving
2-25	1201	3150	Addressograph Co.....	Changes.....	1.58	Rent and Office Supplies
2-25	1202	3151	Zaiser's.....	Office Supplies.....	27.88	Rent and Office Supplies
2-25	1203	3152	Central Engraving Co.....	Halftones.....	47.34	Journal Printing and Engraving
2-25	1204	3153	Wallace-Homestead Co.....	Reprints.....	126.95	Stationery and Printing (\$84.08), Journal Printing and Engraving (\$42.87)
2-25	1205	3154	Direct Advertising Co.....	Letters.....	79.99	Legislative Committee
2-25	1206	3155	Western Letter Service.....	Letters.....	14.90	Stationery and Printing
3-9	1207	3156	Vernon Blank.....	Office and Legis. Exp.....	31.89	Rent and Office Supplies (\$10.39), Legislative Committee (\$21.50)
3-9	1208	3157	Arthur W. Erskine.....	Med., Ed. & Hosp. Comm.....	115.75	Other Committees
4-4	1215	3158	Roscoe Jepson.....	Program Comm. Meetings.....	27.50	Annual Session
Amount Forward.....					\$ 6,958.94	

Schedule No. 1—Continued

Date 1931	Check No.	Order No.	Drawn in Favor of	Distribution	Amount	Charged to:
				Amount Brought Forward.....	\$ 6,958.94	
4-4	1216	3159	Iowa Press Clipping Bureau.....	February Clippings.....	27 85	Journal Printing and Engraving
4-4	1217	3160	Western Letter Service.....	Multigraphing Letters.....	2 95	Stationery and Printing
4-4	1218	3161	C. S. Cornell.....	Med. Econ. Committee.....	3 72	Medical Economics Committee
4-4	1219	3162	I. E. Nervig.....	Med. Econ. Committee.....	30.00	Medical Economics Committee
4-4	1220	3163	John I. Marker.....	Med. Econ. Committee.....	31.52	Medical Economics Committee
4-4	1221	3164	R. F. Childs.....	Med. Econ. Committee.....	12 80	Medical Economics Committee
4-4	1222	3165	C. S. Cornell.....	Med. Econ. Committee.....	3 60	Medical Economics Committee
4-4	1223	3166	Harry H. Lamb.....	Program Comm. Meetings.....	60 00	Annual Session
4-4	1224	3167	N. W. Bell Telephone Co.....	Service.....	54 25	Legislative Committee (\$10.00), Med. Econ. Committee (\$4.25), Annual Session (\$10.00)
4-4	1225	3168	Dorothy Tam.....	Extra Work.....	34 50	General Salaries
4-4	1209	3169	Dorothy McCarthy.....	March Salary.....	100 00	General Salaries
4-4	1210	3170	Bankers Building Corp.....	Rent for March.....	107 00	Rent and Office Supplies
3-27	1211	3171	Dorothy Nelson.....	March Salary.....	115 00	General Salaries
3-27	1212	3172	R. R. Simmons.....	March Salary.....	125 00	General Salaries
3-27	1213	3173	Virginia Bennett.....	March Salary.....	125 00	General Salaries
3-27	1214	3174	Vernon Blank.....	March Salary.....	500 00	General Salaries
4-4	1226	3175	Vernon Blank.....	Expenses.....	61 26	Rent and Office Supplies (\$8.39), Co. Soc. Services (\$49.87), Leg- islative Comm. (\$3.00)
4-4	1227	3176	Beals Printing Co.....	Legislative Folder.....	139 60	Legislative Committee
4-4	1228	3177	Curtis, Inc.....	Mailing Envelopes.....	6 00	Rent and Office Supplies
4-4	1229	3178	Zaiser s.....	Office Supplies.....	20 55	Rent and Office Supplies
4-4	1230	3179	Western Union Tel. Co.....	February Account.....	2 72	Legislative Committee
4-4	1231	3180	Central Engraving Co.....	Half-tones.....	36 99	Journal Printing and Engraving
4-4	1232	3181	Direct Advertising Co.....	Letters.....	170 95	Legislative Committee
4-4	1233	3182	Wallace-Homestead Co.....	Journal Printing.....	1,265 52	Stationery and Printing (\$185.00), Journal Printing (\$1,080.52)
4-4	1234	3183	Muscatine County Med. Society.....	Exp. in Baker Case.....	192 03	Administrative Miscellaneous
4-16	1235	3184	Hotel Kirkwood.....	Room Rent, John Bixler.....	69 35	Legislative Committee
4-16	1236	3185	Thos. A. Burcham.....	Legislative Committee.....	872 27	Legislative Committee
4-23	1237	3186	Robt. L. Parker.....	Trip to Monroe City.....	10 00	Council
4-23	1238	3187	Bankers Bldg. Corp.....	April Rent.....	107 00	Rent and Office Supplies
4-23	1239	3188	D. M. Rubber Stamp Works.....	Supplies.....	2 15	Rent and Office Supplies
4-23	1240	3189	A. V. Hennessy.....	M. E. & H. Committee.....	21 46	Other Committees
4-23	1241	3190	Old Dutch Ribbon and Carbon Co.....	Ribbon for Typewriters.....	12 00	Rent and Office Supplies
4-23	1242	3191	Dorothy Tam.....	Extra Work.....	31 25	General Salaries
4-23	1243	3192	E. B. Winnett.....	Treasurer's Salary.....	50 00	General Salaries
4-23	1244	3193	Dorothy McCarthy.....	April Salary.....	100 00	General Salaries
4-23	1245	3194	Dorothy Nelson.....	April Salary.....	115 00	General Salaries
4-23	1246	3195	Virginia Bennett.....	April Salary.....	125 00	General Salaries
4-23	1247	3196	R. R. Simmons.....	April Salary.....	125 00	General Salaries
4-23	1248	3197	Robt. L. Parker.....	Half Year's Salary.....	150 00	General Salaries
4-23	1249	3198	Vernon Blank.....	April Salary.....	500 00	General Salaries
4-23	1250	3199	Des Moines Club.....	Committee Lunches.....	20 90	Annual Session
4-23	1251	3200	E. M. Meyers.....	Trustees Meeting.....	3 77	Trustees
4-23	1252	3201	N. W. Bell Telephone Co.....	Service.....	119 41	Trustees (\$9.41), Legislative Com- mittee (\$100.00), Annual Ses- sion (\$10.00)
4-23	1253	3202	G. F. Harkness.....	Trustees Meeting.....	19 60	Trustees
4-23	1254	3203	I. E. Nervig.....	Committee Meeting.....	46 00	Medical Economics Committee
4-23	1255	3204	Gaar Brothers.....	Cleaning Typewriters.....	3 75	Rent and Office Supplies
4-23	1256	3205	Iowa Press Clipping Bureau.....	March Clippings.....	29 77	Journal Printing
4-23	1257	3206	Western Union Tel. Co.....	Service.....	14 55	Legislative Committee (\$10.00), Annual Session (\$4.55)
4-23	1258	3207	G. F. Harkness.....	Baker Toll Calls.....	2 15	Administrative Miscellaneous
4-23	1259	3208	Central Engraving Co.....	Half-tones.....	47 57	Journal Printing
4-23	1260	3209	A. C. Conaway.....	Councilor Expense.....	2 75	Council
4-23	1261	3210	Direct Advertising Co.....	Letters.....	84 92	Legislative Committee
4-23	1262	3211	C. A. Boice.....	Councilor Expense.....	57 41	Council
4-23	1263	3232	Wallace-Homestead Co.....	Printing Journal.....	848 94	Stationery and Printing (\$166.75), Journal Printing (\$682.19)
4-23	1264	3233	Dutcher, Walker & Ries.....	1st Quarter Legal Defense.....	310 55	Medico-Legal
5-14	1265	3234	St. Louis Button Co.....	Badges.....	133 09	Annual Session
5-14	1266	3235	Vernon Blank.....	Traveling Expenses.....	69 65	Rent and Office Supplies (\$14.08), Co. Soc. Services (\$45.22), Legislative Com. (\$10.35)
5-14	1267	3216	James Monahan.....	Managing Exhibits.....	25 00	Annual Session
5-14	1268	3217	E. F. Biddle.....	Service and Lantern.....	43 00	Annual Session
5-15	1269	3218	Mrs. R. L. Finch.....	Banquet Singers.....	50 00	Annual Session
5-15	1270	3219	Lauren Crosten.....	Banquet Music.....	25 00	Annual Session
5-19	1271	3220	Mrs. T. A. Burcham.....	Annual Meeting Exp.....	106 00	Annual Session
5-21	1295	3221	Iowa-Des Moines National Bank.....	Bond Transaction Exp.....	185 73	Administrative Miscellaneous
5-27	1272	3222	Campbell P. Howard.....	Travel Expense, Montreal.....	25 00	Annual Session
5-27	1273	3223	M. W. Bredimus.....	Signs for State Meeting.....	45 40	Annual Session
5-27	1274	3224	Bratton and Knouf.....	Tickets, Programs, etc.....	25 75	Annual Session
5-27	1275	3225	General Typewriter Exch.....	Rent on Typewriter.....	1 50	Annual Session
5-27	1276	3226	Kirkwood Floral.....	Flowers for Banquet.....	25 00	Annual Session
5-27	1277	3226	Polk Co. Med. Society.....	Cab Service for Clinic.....	10 50	Annual Session
5-27	1278	3228	Hotel Fort Des Moines.....	Banquet and Smoker.....	984 75	Annual Session
5-27	1279	3229	National Audiphone Co.....	Fort Dodge Meeting.....	75 00	Annual Session
5-27	1280	3230	Chicago, R. I. R. R.....	Exp. Howard & Mackinzie.....	204 38	Annual Session
5-27	1281	3231	Polk Co. Med. Society.....	Misc. Exp. State Meeting.....	5 15	Annual Session
5-27	1282	3232	Davis Conway Co.....	Annual Audit.....	50 00	Administrative Miscellaneous
5-27	1282	3233	Vernon Blank.....	Miscellaneous Expense.....	8 00	Rent and Office Supplies (\$1.96), Journal Printing (\$6.04)
5-27	1284	3234	Channing G. Smith.....	Expense to Iowa City.....	19 74	Administrative Miscellaneous
5-27	1285	3235	N. W. Bell Telephone Co.....	Telephone.....	42 83	Spkrs. Bur. (\$3.90), Med. Econ. (\$2.50), Other Com. (\$8.05), Ann. Ses. (\$8.43), Adm. Misc. (\$1.20), Rent and Office Sup. (\$8.40), Co. Soc. Services (\$4.50), Trustees (\$1.60), Coun (\$4.25)
5-27	1286	3236	Dorothy Tam.....	Extra Work.....	58 25	General Salaries
5-27	1287	3237	Bankers Building Corp.....	Rent.....	107 00	Rent and Office Supplies
5-27	1288	3238	Dorothy McCarthy.....	May Salary.....	100 00	General Salaries
			Amount Forward.....		\$16,515 99	

Schedule No. 1—Continued

Date 1931	Check No.	Order No.	Drawn in Favor of	Distribution	Amount	Charged to:
				Amount Brought Forward.....	\$ 16,515.99	
5-27	1289	3239	Dorothy Nelson.....	May Salary.....	115 00	General Salaries
5-27	1290	3240	Virginia Bennett.....	May Salary.....	125 00	General Salaries
5-27	1291	3241	R. R. Simmons.....	May Salary.....	125 00	General Salaries
5-27	1292	3242	Vernon Blank.....	May Salary.....	500 00	General Salaries
5-27	1293	3243	Western Union.....	Service.....	5 71	Other Committees (\$.90), Annual Session (\$4.33), Spkrs. Bur. (\$.48)
5-27	1294	3244	Miller Book Store.....	Framing Maps.....	8 85	Rent and Office Supplies
6-3	1296	3245	Hobart Cabinet Co.....	Steel Files.....	24 75	Rent and Office Supplies
6-5	1297	3246	Mrs. Wilma Glenn.....	Selling Histories.....	18 80	Journal Printing
6-5	1298	3247	Dutcher, Walker & Ries.....	Medico-Legal.....	50 00	Medico-Legal
6-25	1299	3248	A. M. A.....	Directory.....	12 00	Rent and Office Supplies
6-25	1300	3249	Dorothy McCarthy.....	June Salary.....	100 00	General Salaries
6-25	1301	3250	Dorothy Nelson.....	June Salary.....	115 00	General Salaries
6-25	1302	3251	Virginia Bennett.....	June Salary.....	125 00	General Salaries
6-25	1303	3252	R. R. Simmons.....	June Salary.....	125 00	General Salaries
6-25	1304	3253	Vernon Blank.....	June Salary.....	509 00	General Salaries
6-25	1305	3254	Bankers Bldg. Corp.....	Rent.....	107 00	Rent and Office Supplies
6-25	1306	3255	D. M. Photo Copy Co.....	Committee Expense.....	3 00	Medical Economics Committee
6-25	1307	3256	D. M. Clean Towel Service.....	Towel Service.....	3 75	Rent and Office Supplies
6-25	1308	3257	N. W. Bell Telephone Co.....	Telephone.....	44 85	Other Com. (\$2.10), Ann. Ses. (\$7.35), Spkrs. Bur. (\$7.80), Adm. Misc. (\$.95), Rent and Office Sup. (\$11.50), Co. Soc. Services (\$3.85), Trustees (\$6.20), Counc. (\$5.10)
6-25	1309	3258	Des Moines Club.....	Program Comm. Dinner.....	5 80	Annual Session
6-25	1310	3259	A. V. Hennessy.....	Council Meeting.....	11 15	Council
6-25	1311	3260	C. A. Boice.....	Council Meeting.....	8 64	Council
6-25	1312	3261	W. L. Hearst.....	Council Meeting.....	9 16	Council
6-25	1313	3262	F. A. Hennessy.....	Council Meeting.....	17 34	Council
6-25	1314	3263	W. Jepson.....	Council Meeting.....	20 61	Council
6-25	1315	3264	H. A. Spilman.....	Council Meeting.....	7 98	Council
6-25	1316	3265	F. P. Winkler.....	Council Meeting.....	26 03	Council
6-25	1317	3266	L. R. Woodward.....	Council Meeting.....	9 30	Council
6-25	1318	3267	Harry Lamb.....	Program Comm. Expense.....	11 20	Annual Session
6-25	1319	3268	E. M. Myers.....	Trustees Meeting.....	5 88	Trustees
6-25	1320	3269	Channing Smith.....	Program Comm. Expense.....	31 36	County Society Services (\$24.36), Annual Session (\$7.00)
6-25	1321	3270	Robert L. Parker.....	Expense to A. M. A.....	150 00	Administrative Miscellaneous
6-25	1322	3271	G. F. Harkness.....	Trustees Meeting.....	21 60	Trustees
6-25	1323	3272	Wm. Jepson.....	Council Meeting.....	20 41	Council
6-25	1324	3273	Register & Tribune Engraving Co.....	Halftones.....	4 09	Journal Printing
6-25	1325	3274	A. M. A.....	N. & N. R.....	1 50	Rent and Office Supplies
6-25	1326	3275	Fred F. Agnew.....	Council Expenses.....	48 49	Council
6-25	1327	3276	Berkowitz Envelope Co.....	Envelopes.....	165 87	Journal Printing
6-25	1328	3277	Broadlawn Hospital.....	Taxi Fare.....	.80	Annual Session
6-25	1329	3278	A. F. Brandenburg.....	Reporting Speech.....	13 75	Administrative Miscellaneous
6-25	1330	3279	Gaar Brothers.....	Stencils.....	3 50	Rent and Office Supplies
6-25	1331	3280	LaVere Braucht Floral.....	Flowers.....	10 60	Administrative Miscellaneous
6-25	1332	3281	Iowa Press Clipping Bureau.....	Clippings.....	27 95	Journal Printing
6-25	1333	3282	F. A. Ely.....	Legal Letters.....	6 45	Medico-Legal
6-25	1334	3283	Younker Brothers.....	Rules of Order.....	1 50	Rent and Office Supplies
6-25	1335	3284	Western Union Telegraph Co.....	May Telegrams.....	18 01	Council (\$1.89), Legislative Com. (\$10.00), Med. Econ. Com. (\$1.83), Other Comm (\$1.29)
6-25	1336	3285	Zaiser's.....	Office Supplies.....	17 40	Rent and Office Supplies
6-25	1337	3286	Addressograph Co.....	New Plates.....	7 03	Rent and Office Supplies
6-25	1338	3287	Blue Line Transfer Co.....	Delivery of two files.....	4 00	Annual Session
6-25	1339	3288	Gray Wells Transfer Co.....	Balance of Annual Session.....	1 50	Annual Session
6-25	1340	3289	Central Engraving Co.....	Halftones.....	120 43	Journal Printing
6-25	1341	3290	Direct Advertising.....	Multigraphing Letters.....	37 27	Stationery and Printing
6-25	1342	3291	Wallace-Homestead Co.....	Journal Printing.....	1,750.22	Stationery and Printing (\$74.85), Annual Session (\$197.81), Jour- nal (\$1,477.56)
6-25	1343	3292	Western Letter Service.....	Multigraphing Letters.....	22 10	Stationery and Printing
6-25	1344	3293	J. H. Welch Printing Co.....	Printing.....	38 84	Stationery and Printing
6-25	1345	3294	Fidelity & Deposit Co.....	Sec. and Treas. Bonds.....	87 50	Administrative Miscellaneous
7-22	1346	3295	F. B. Langdon.....	Expense for Smoker.....	185 25	Annual Session
7-22	1347	3296	Master Reporting Co.....	Reporting Annual Session.....	253 50	Annual Session
7-27	1348	3297	Mrs. Wilma Glenn.....	Extra Work.....	6 50	General Salaries
7-27	1349	3298	Iowa-Des Moines National Bank.....	Safe Keeping May to July.....	2 27	Administrative Miscellaneous
7-27	1350	3299	Bankers Bldg. Corp.....	Rent.....	107 00	Rent and Office Supplies
7-27	1351	3300	Dorothy McCarthy.....	July Salary.....	100 00	General Salaries
7-27	1352	3301	R. R. Simmons.....	July Salary.....	100 00	General Salaries
7-27	1353	3302	Dorothy Nelson.....	July Salary.....	115 00	General Salaries
7-27	1354	3303	Virginia Bennett.....	July Salary.....	125 00	General Salaries
7-27	1355	3304	Vernon Blank.....	July Salary.....	500 00	General Salaries
7-27	1356	3305	N. W. Bell Telephone Co.....	Services.....	25 91	Adm. Misc. (\$3.75), Rent and Of- fice Sup. (\$5.10), Co. Soc. Serv. (\$4.25), Trustees (\$.80), Coun- cil (\$5.01), Legis. Com. (\$1.00), Med. Econ. (\$2.00), Spkrs. Bur. (\$1.00)
7-27	1357	3306	Central Engraving Co.....	Halftones.....	9 22	Journal Printing
8-3	1358	3307	Western Letter Service.....	Multigraphing Letters.....	6 25	Stationery and Printing
8-3	1359	3308	Robert L. Parker.....	Trip to Bloomfield.....	17 06	County Society Services
8-3	1360	3309	Vernon Blank.....	Miscellaneous Expense.....	18 00	Rent and Office Sup. (\$3.60), Co. Soc. Serv. (\$3.40), Journal Printing (\$3.00)
8-3	1362	3310	Vernon Blank.....	Annual Session Expense.....	2 20	Annual Session
8-3	1361	3311	Iowa Press Clipping Bureau.....	Clippings.....	14 67	Journal Printing
8-3	1363	3312	Stoner McCray.....	Oilcloth Chart.....	20 00	County Society Services
8-3	1364	3313	Western Union Telegraph Co.....	Telegrams.....	5 56	Co. Soc. Serv. (\$2.46), Council (\$2.01), Spkrs. Bur. (\$1.09)
8-3	1365	3314	Zaiser's.....	Office Supplies.....	7 15	Rent and Office Supplies
8-3	1366	3315	Direct Advertising Co.....	Multigraphing Letters.....	48 79	Stationery and Printing

Amount Forward..... \$ 23,039.20

Schedule No. 1—Continued

Date 1931	Check No.	Order No.	Drawn in Favor of	Distribution	Amount	Charged to:
				Amount Brought Forward.....	\$ 23,039.20	
8-3	1367	3316	Wallace-Homestead Co.....	Journal and Printing.....	974.02	Stationery and Printing (\$367.50), Journal Printing (\$606.52)
8-12	1368	3317	Postmaster, Des Moines.....	Journal Postage.....	100.00	Journal Printing
8-26	1369	3318	Warrior Flower Shop.....	Flowers.....	5.00	Administrative Miscellaneous
8-26	1372	3319	Iowa Press Clipping Bureau.....	Clippings.....	12.77	Journal Printing
8-26	1373	3320	D. M. Clean Towel.....	July and August Service.....	2.50	Rent and Office Supplies
8-26	1370	3321	Des Moines Club.....	Program Comm. Luncheon.....	4.25	Annual Session
8-26	1374	3322	Clifford Heer.....	Preparing Medical Contract.....	15.00	County Society Services
8-26	1375	3323	N. W. Bell Telephone Co.....	Telephone.....	34.60	Adm. Misc. (\$3.40), Rent and Office Sup. (\$8.75), Co. Soc. Serv. (\$7.45), Council (\$5.80), Other Com. (\$8.00), Spkrs. Bur. (\$8.40)
8-26	1376	3324	R. R. Simmons.....	August Salary.....	100.00	General Salaries
8-26	1377	3325	Dorothy McCarthy.....	August Salary.....	100.00	General Salaries
8-26	1378	3326	Dorothy Nelson.....	August Salary.....	115.00	General Salaries
8-26	1379	3327	Virginia Bennett.....	August Salary.....	125.00	General Salaries
8-26	1380	3328	Vernon Blank.....	August Salary.....	500.00	General Salaries
8-26	1381	3329	Bankers Bldg. Corp.....	Rent.....	107.00	Rent and Office Supplies
8-26	1382	3330	Zaiser's.....	Office Supplies.....	11.20	Rent and Office Supplies
8-26	1383	3331	Central Engraving Co.....	Half-tones.....	28.58	Journal Printing
8-26	1371	3332	Western Union Telegraph Co.....	July Account.....	1.30	County Society Services (\$.59), Council (\$.71)
8-26	1384	3333	Stoner McCray System.....	Correcting Chart.....	2.50	County Society Services
8-26	1385	3334	Remington Rand Co.....	Cardex Slips.....	.60	Rent and Office Supplies
8-26	1386	3335	Wallace-Homestead Co.....	Journal Printing.....	859.31	Journal Printing
9-8	1387	3336	B. L. Eiker.....	Expense.....	61.05	County Society Services
9-8	1388	3337	Robert L. Parker.....	Program Comm. Luncheon.....	5.90	County Society Services
9-8	1389	3338	Gerald Blake.....	Analysis of Contracts.....	25.00	County Society Services
9-8	1390	3339	Channing G. Smith.....	Expense—Traveling.....	123.12	County Society Services
9-8	1391	3340	E. M. Myers.....	Trustees Meeting.....	4.20	Trustees
9-3	1392	3341	Gordon F. Harkness.....	Trustees Meeting.....	21.60	Trustees
9-8	1393	3342	B. L. Eiker.....	Trustees Meeting.....	6.80	Trustees
9-8	1394	3343	Dorothy Tam.....	Extra Work.....	4.00	General Salaries
9-8	1395	3344	Wm. Byrd Press.....	Book.....	5.00	Other Committees
9-8	1396	3345	Chicago Med. Book Co.....	Books.....	19.35	Other Committees
9-8	1397	3346	Paul B. Hoerber.....	Books.....	17.00	Other Committees
9-8	1398	3347	Addressograph Co.....	New Plates.....	6.14	Rent and Office Supplies
9-8	1399	3348	Direct Advertising Co.....	Multigraphing Letters.....	71.27	Stationery and Printing
		3349	Void.....			
9-29	1400	3350	N. W. Bell Telephone Co.....	Telephone.....	38.45	Adm. Misc. (\$1.20), Rent and Of- fice Sup. (\$8.75), Co. Soc. Serv. (\$1.30), Trustees (\$1.20), Coun- cil (\$4.60), Med. Econ. (\$.40), Spkrs. Bur. (\$21.00)
9-29	1401	3351	Robert L. Parker.....	Secretary's Salary First Quarter.....	75.00	General Salaries
9-29	1402	3352	R. R. Simmons.....	September Salary.....	100.00	General Salaries
9-29	1403	3353	Dorothy McCarthy.....	September Salary.....	100.00	General Salaries
9-29	1404	3354	Bankers Building Corp.....	Rent.....	107.00	Rent and Office Supplies
9-29	1405	3355	Dorothy Nelson.....	September Salary.....	115.00	General Salaries
9-29	1406	3356	Virginia Bennett.....	September Salary.....	125.00	General Salaries
9-29	1407	3357	Vernon Blank.....	September Salary.....	500.00	General Salaries
9-29	1408	3358	James G. Macrae.....	Council Meeting.....	7.50	Council
9-29	1409	3359	W. L. Hearst.....	Council Meeting.....	31.05	Council
9-29	1410	3360	C. A. Boice.....	Council Meeting.....	12.80	Council
9-29	1411	3361	B. L. Eiker.....	Trustees Meeting.....	8.20	Council
9-29	1412	3362	L. R. Woodward.....	Council Meeting.....	13.10	Council
9-29	1413	3363	A. W. Erskine.....	Council Meeting.....	18.34	Council
9-29	1414	3364	Wm. Jepson.....	Council Meeting.....	23.01	Council
9-29	1415	3365	D. M. Electric Co.....	Light Bulbs.....	1.60	Rent and Office Supplies
9-29	1416	3366	Iowa Press Clipping Bureau.....	Clippings.....	12.95	Journal Printing
9-29	1417	3367	Curtis 1000 Inc.....	Envelopes.....	2.85	Rent and Office Supplies
9-29	1418	3368	Addressograph Co.....	Plates.....	1.50	Rent and Office Supplies
9-29	1419	3369	Zaiser's.....	Office Supplies.....	18.05	Rent and Office Supplies
9-29	1420	3370	Wallace-Homestead Co.....	Journal Printing.....	688.91	Stationery and Printing (\$135.00), Journal Printing (\$553.91)
9-29	1421	3371	Iowa-Des Moines National Bank.....	Safe Keeping Charges.....	5.73	Administrative Miscellaneous
10-13	1422	3372	Robert L. Parker.....	Council Meeting.....	24.85	County Society Services
10-13	1423	3373	Robert L. Parker.....	District Conference.....	27.00	County Society Services
10-13	1424	3374	Vernon Blank.....	County Medical Society.....	16.65	County Society Services
10-13	1425	3375	Herman B. Carlson.....	Baker Case.....	23.40	Administrative Miscellaneous
10-13	1426	3376	Dutcher, Walker & Ries.....	Medico-Legal.....	221.30	Medico-Legal
10-13	1427	3377	Direct Advertising Co.....	Multigraphing Letters.....	34.91	Stationery and Printing
10-29	1428	3378	D. M. Clean Towel Co.....	September and October Account.....	2.50	Rent and Office Supplies
10-29	1429	3379	John H. Schmauss.....	Typewriter Keys.....	4.25	Rent and Office Supplies
10-29	1430	3380	Vernon Blank.....	Petty Cash.....	14.15	Rent and Office Supplies (\$7.40), Journal Printing (\$6.75)
10-29	1431	3381	Dorothy McCarthy.....	October Salary.....	100.00	General Salaries
10-29	1432	3382	R. R. Simmons.....	October Salary.....	100.00	General Salaries
10-29	1433	3383	Dorothy Nelson.....	October Salary.....	115.00	General Salaries
10-29	1434	3384	Virginia Bennett.....	October Salary.....	125.00	General Salaries
10-29	1435	3385	Vernon Blank.....	October Salary.....	500.00	General Salaries
10-29	1436	3386	Bankers Bldg. Corp.....	October Rent.....	107.00	Rent and Office Supplies
10-29	1437	3387	N. W. Bell Telephone Co.....	Telephone.....	49.10	Rent and Office Sup. (\$8.80), Co. Soc. Serv. (\$6.75), Council (\$9.95), Med. Ec. (\$1.70), Spkrs. Bur. (\$21.90)
10-29	1438	3388	Iowa Press Clipping Bureau.....	Clippings.....	14.70	Journal Printing
10-29	1439	3389	Western Union.....	Telegrams.....	3.23	Journal Printing (\$2.16), Speakers Bureau (\$1.07)
10-29	1440	3390	Zaiser's.....	Office Supplies.....	12.95	Rent and Office Supplies
10-29	1441	3391	Central Engraving Co.....	Half-tones.....	75.69	Journal Printing
10-29	1442	3392	Wallace-Homestead Co.....	Journal Printing.....	727.60	Stationery and Printing (\$70.50), Journal Printing (\$657.10)
10-29	1443	3393	Direct Advertising Co.....	Multigraphing Letters.....	119.71	Stationery and Printing (\$52.33) County Society Serv. (\$67.38)
11-12	1444	3394	LaVere Braucht Floral.....	Flowers.....	10.00	Administrative Miscellaneous
11-12	1445	3395	Mrs. Wilma Glenn.....	Extra Work.....	4.50	General Salaries
			Amount Forward.....		\$ 30,947.79	

Schedule No. 1—Continued

Date 1931	Check No.	Order No.	Drawn in Favor of	Distribution	Amount	Charged to:
				Amount Brought Forward.....	\$ 30,947.79	
11-12	1446	3396	Mr. Robt. Henderson.....	Code of Iowa.....	5.00	Legislative Committee
11-12	1447	3397	Vernon Blank.....	Officers Conference.....	5.50	County Society Services
11-12	1448	3398	Robert L. Parker.....	Program Comm. Dinners.....	6.50	Annual Session
11-12	1449	3399	R. F. Childs.....	Economics Comm.....	8.65	Medical Economics Committee
11-12	1450	3400	Channing Smith.....	County Society Services.....	9.25	County Society Services
11-12	1451	3401	Vernon Blank.....	County Meeting.....	10.50	County Society Services
11-12	1452	3402	Robert L. Parker.....	Ottumwa Meeting.....	11.00	County Society Services
11-12	1453	3403	Channing Smith.....	Sheldon Meeting.....	23.00	County Society Services
11-12	1454	3404	Channing Smith.....	Officers Conference.....	29.05	County Society Services
11-12	1455	3405	Channing Smith.....	County Services.....	38.50	County Society Services
11-12	1456	3406	John I. Marker.....	Med. Econ. Meetings.....	26.52	Medical Economics Committee
11-12	1457	3407	L. R. Woodward.....	Telephone Calls.....	19.10	Council
11-30	1458	3408	Omaha World Herald.....	10 Copies.....	1.00	Legislative Committee
11-30	1459	3409	D. M. Clean Towel Co.....	November and December Account..	2.50	Rent and Office Supplies
11-30	1460	3410	N. W. Bell Telephone Co.....	Telephone.....	33.40	Adm. Misc. (\$1.35), Rent and Of- fice Sup. (\$8.75), Co. Soc. Serv. (\$4.82), Trustees (\$1.80), Coun- cil (\$9.63), Med. Ec. (\$1.15), Journal Prtg. (\$1.45), Spkrs. Bur. (\$4.45)
11-30	1461	3411	Bankers Bldg. Corp.....	Rent.....	107.00	Rent and Office Supplies
11-30	1462	3412	R. R. Simmons.....	November Salary.....	100.00	General Salaries
11-30	1463	3413	Dorothy Nelson.....	November Salary.....	115.00	General Salaries
11-30	1464	3414	Dorothy McCarthy.....	November Salary.....	115.00	General Salaries
11-30	1465	3415	Virginia Bennett.....	November Salary.....	125.00	General Salaries
11-30	1466	3416	Vernon Blank.....	November Salary.....	500.00	General Salaries
11-30	1467	3417	Iowa Press Clipping Bureau.....	Clippings.....	16.22	Journal Printing
11-30	1468	3418	Gaar Brothers.....	Stencils.....	3.50	Rent and Office Supplies
11-30	1469	3419	Western Union.....	Telegrams.....	6.40	Adm. Misc. (\$.15), Journal Print- ing (\$5.31), Speakers Bur. (\$.94)
11-30	1470	3420	Bratten & Knouf.....	Circulars.....	3.75	Stationery and Printing
11-30	1471	3421	Zaiser's.....	Office Supplies.....	4.75	Rent and Office Supplies
11-30	1472	3422	Addressograph Co.....	Plates.....	3.19	Rent and Office Supplies
11-30	1473	3423	Central Engraving Co.....	Halftones.....	3.66	Journal Printing
11-30	1474	3424	Wallace-Homestead Co.....	Printing Journals.....	668.25	Journal Printing
11-30	1475	3425	Direct Advertising Co.....	Multigraphing Letters.....	7.85	Stationery and Printing
12-17	1476	3426	Vernon Blank.....	County Expenses.....	7.00	County Society Services
12-17	1477	3427	Vernon Blank.....	Petty Cash.....	11.95	Rent and Office Supplies
12-17	1478	3428	Vernon Blank.....	Officers Conference.....	27.50	County Society Services
12-19	1479	3429	Dutcher, Walker & Ries.....	Medico-Legal.....	282.15	Medico-Legal
12-24	1480	3430	N. W. Bell Telephone Co.....	Telephone.....	24.25	Rent and Office Sup. (\$8.75), Co. Soc. Serv. (\$3.90), Council (\$2.80), Journal Prtg. (\$.20), Speakers Bureau (\$8.60)
12-24	1481	3431	Bankers Bldg. Corp.....	Rent.....	107.00	Rent and Office Supplies
12-24	1482	3432	R. R. Simmons.....	December Salary.....	100.00	General Salaries
12-24	1483	3433	Dorothy Nelson.....	December Salary.....	115.00	General Salaries
12-24	1484	3434	Dorothy McCarthy.....	December Salary.....	115.00	General Salaries
12-24	1485	3435	Virginia Bennett.....	December Salary.....	125.00	General Salaries
12-24	1486	3436	Vernon Blank.....	December Salary.....	500.00	General Salaries
12-24	1487	3437	Iowa Press Clipping Bureau.....	Clippings.....	9.45	Journal Printing
12-24	1488	3438	Zaiser's.....	Office Supplies.....	18.70	Rent and Office Supplies
12-24	1489	3439	Central Engraving Co.....	Halftones.....	4.63	Journal Printing
12-24	1490	3440	Wallace-Homestead Co.....	Printing Journal.....	605.70	Stationery and Printing (\$8.15), Journal Printing (\$597.55)
12-24	1491	3441	Direct Advertising Co.....	Multigraphing Letters.....	41.90	Stationery and Printing
TOTAL EXPENDITURES FOR THE YEAR 1931..					\$35,052.06	

Summary and Distribution of Expenditures

Administrative Miscellaneous.....	\$ 798.16
Rent and Office Supplies.....	1,863.11
Stationery and Printing.....	1,784.61
General Salaries.....	11,890.75
County Society Services.....	974.61
Trustees.....	145.14
Council.....	482.10
Medico-Legal.....	1,026.55
Legislative Committee.....	2,326.39
Medical Economics Committee.....	234.10
Other Committees.....	1,466.21
Annual Session.....	2,678.79
Journal.....	9,297.91
Speakers Bureau (General, listed above in Schedule No. 1).....	83.63
Speakers Bureau (Special, listed below in Schedule No. 2).....	2,471.34
TOTAL.....	\$37,523.40

Schedule No. 2
Expenditures—Speakers Bureau
For the Year Ended December 31, 1931

Date	Check No.	Order No.	Drawn in Favor of	Distribution	Amount
1-17	2	3201	Wallace-Homestead Co.	Reprints	\$ 2.75
1-17	3	3202	T. U. McManus	Travel Expense	59.45
1-17	4	3205	D. J. Glomset	Travel Expense	52.91
1-17	5	3204	Bankers Printing Co.	Letterheads	10.90
1-17	6	3206	Western Letter Service	Form Letters	42.38
2-7	7	3211	D. J. Glomset	Travel Expense	19.41
2-7	8	3210	H. P. Smith	Travel Expense	11.72
2-7	9	3209	Western Letter Service	Form Letters	10.43
3-2	10	3212	D. J. Glomset	Travel Expense	64.60
3-2	11	3213	Hotel Kirkwood	Meals—Meeting	11.10
3-2	12	3216	Western Letter Service	Form Letters	3.75
3-2	13	3214	Joseph Brown	Travel Expense	25.04
3-2	14	3217	A. M. Smythe	Travel Expense	8.50
3-2	15	3215	Wallace-Homestead Co.	Stationery	22.75
4-8	16	3224	D. M. Slide Co.	Lantern Rental	3.90
4-8	17	3223	H. W. Rathe	Travel Expense	11.32
4-8	18	3222	W. A. Rohlf	Travel Expense	12.20
4-8	19	3221	Zaiser's	Calendars	1.05
4-8	20	3220	Carpenter-Skilling	Printing	8.50
4-8	21	3219	Hotel Kirkwood	Rooms	20.10
4-8	22	3218	Western Letter Service	Form Letters	2.85
4-23	23	3225	Western Letter Service	Form Letters	3.95
4-23	24	3226	Joseph Brown	Travel Expense	8.00
4-23	25	3227	E. D. Plass	Travel Expense	24.40
4-23	26	3228	College of Medicine	Extension Work	1,216.70
6-18	27	3229	A. A. Schultz	Travel Expense	5.60
6-18	28	3230	D. J. Glomset	Travel Expense	29.50
6-18	29	3231	E. D. Plass	Travel Expense	4.60
6-18	30	3232	A. D. Woods	Travel Expense	3.20
6-18	31	3233	H. E. Kleinberg	Travel Expense	8.00
8-18	32	3234	E. M. Myers	Travel Expense	2.00
7-7	33	3235	B. F. Wolverton	Travel Expense	6.80
7-7	34	3236	Iowa Congress of P. T. A.	Travel Expense	75.00
8-7	35	3237	D. J. Glomset	Travel Expense	11.35
8-7	36	3238	F. A. Hennessy	Travel Expense	10.00
8-7	37	3239	L. R. Woodward	Travel Expense	14.72
8-7	38	3240	H. A. Spilman	Travel Expense	8.00
8-7	39	3241	J. C. Shrader	Travel Expense	22.80
8-7	40	3242	State University of Iowa	Multigraph Work	22.60
9-14	41	3243	D. J. Glomset	Travel Expense	52.50
9-14	42	3244	T. U. McManus	Travel Expense	25.30
9-14	43	3245	D. M. Nelson	Postage	3.00
9-14	44	3246	Zaiser's	Envelopes	1.75
10-26	45	3247	F. H. Clark	Refund	20.00
10-26	46	3248	Zaiser's	Office Supplies	6.70
10-26	47	3249	Robert L. Parker	Travel Expense	18.50
10-26	48	3250	Gaar Brothers	Stencils	3.50
10-26	49	3251	M. E. Barnes	Travel Expense	5.60
10-26	50	3252	and		
		3253	Wallace-Homestead Co.	Printing	87.05
10-26	51	3254	R. H. McBride	Expenses	24.67
10-26	52	3255	Western Letter Service	Form Letters	6.45
11-13	53	3256	H. M. Korn	Travel Expense	8.00
11-13	54	3257	Vernon Blank	Travel Expense	40.90
11-13	55	3258	John H. Schmauss	Typewriter Keys	3.00
11-13	56	3259	Frank A. Ely	Travel Expense	7.00
11-13	57	3260	Wm. A. O'Brien	Travel Expense	29.35
11-13	58	3261	A. W. Erskine	Travel Expense	10.00
11-13	59	3262	R. H. McBride	Travel Expense	10.00
11-13	60	3263	Geo. McCreight	Travel Expense	10.00
11-13	61	3264	Robert L. Parker	Travel Expense	10.50
	62	3265	Void		
11-13	63	3266	B. L. Eiker	Travel Expense	5.00
11-13	64	3267	W. D. Abbott	Travel Expense	4.20
11-13	65	3268	R. O. Hughes	Travel Expense	10.00
11-30	66	3269	B. C. Hamilton	Travel Expense	8.00
11-30	67	3270	D. J. Glomset	Committee Expense	4.30
12-28	68	3272	T. U. McManus	Travel Expense	34.80
12-28	69	3273	Vernon Blank	Travel Expense	12.00
12-28	70	3274	J. C. Shrader	Travel Expense	22.80
12-28	71	3275	Railway Express	Express	.83
12-28	72	3276	T. E. Davidson	Travel Expense	5.40
12-28	73	3277	J. W. Meyers	Travel Expense	8.05
12-28	74	3278	L. D. Powell	Travel Expense	15.00
12-28	75	3279	F. A. Hennessy	Travel Expense	13.00
12-28	76	3280	H. A. Spilman	Travel Expense	10.00
12-28	77	3281	Fred R. Watts	Travel Expense	4.00
12-28	78	3282	Direct Advertising Co.	Form Letters	6.01
12-28	79	3271	D. C. Conzett	Travel Expense	8.00
1-14	1	3203	J. C. Shrader	Travel Expense	33.35

TOTAL EXPENDITURES—SPEAKERS BUREAU*..... \$2,471.34

* See next page for special statement of Speaker Bureau Account from date of organization.

SPECIAL STATEMENT OF SPEAKERS BUREAU ACCOUNT
(From time of organization to March 1, 1932)

Year	Income	Gen. Ac	Expenditures Spkrs. Bur. Ac.	Total
1930.....	\$2780.00	\$ 306.26	0	\$ 306.26
1931.....	3909.34	1448.63	2471.34	3919.97
1932.....	20.50	262.00	2143.91	2405.91
TOTAL.....	\$6709.84	\$2016.89	\$4615.25	\$6632.14
Total Income.....	\$6709.84			
Total Expenditures.....	6632.14			
Net Profit.....	\$ 77.70			

EXPLANATION:
The expenditure of \$2405.91 in January and February, 1932, consists of regular monthly expenditures as follows:
Miss Nelson's salary..... \$230.00
Share of telephone bill..... 32.00
This makes the total of \$262.00 paid out of the general funds. The \$2143.91 item paid from the Speakers Bureau funds consists of:
Stationery..... 12.45
Printing..... 181.86
Postage..... 6.00
Committee Traveling Expense.. 28.00
Traveling Expenses..... 109.78 (Of this \$52.48 will be refunded by county medical societies.

Office Supplies..... 3.25
Lantern Rental..... 3.50
Traveling Expenses—Post Graduate Courses..... 1799.07*
\$2405.91

*The reason that this last item (\$1799.07—traveling expenses for the post graduate courses) was not paid during the year 1931 was that the statement was not received from the College of Medicine until January 27, 1932, due to the fact that all of these expenses had to go through the regular routine of the State University. Thus the income from the 1931 courses is credited in that year, whereas the expense is not charged until 1932, this being an exact repetition of what occurred in the previous year when the income from the courses, which started in December, 1930, was credited to the Speakers Bureau account of 1930, and the expense was not paid until 1931. However, the Speakers Bureau shows for its entire period of activity an approximate balance of income and expenditures as shown above.

Dr. E. B. Winnett made the following supplementary report:
The Society now has \$46,633.23, which is divided between Liberty Bonds, the Savings Account, the Secretary's and the Treasurer's Accounts. The expenditures from January 1, 1932, have been \$13,-154.07. The income during the six months, January 1 to May 1, has been \$27,557.00. It may be of some interest to know that on May 1, 1930, the net worth of the Society was \$43,008.00. On May 1, 1931, it was \$37,926.00. Today it is \$46,633.23.
Dr. Winnett moved that his supplementary report be accepted. Dr. W. E. Baker seconded the motion and the motion carried.
Dr. Fay moved that before the Treasurer's Report be accepted, it be referred, with the audit, to the Finance Committee. The motion was seconded by Dr. Winnett and carried.
Dr. McClure requested instructions regarding the report of the Finance Committee, since two members would be unable to attend a committee meeting. The President ruled that the chairman of the Finance Committee should bring in his report.

REPORT OF THE CHAIRMAN OF THE COUNCIL

House of Delegates, Iowa State Medical Society:
The Council has, with as much diligence as possible, performed the duties assigned to it by Chapter VII of the by-laws. A quorum not being present, a meeting was not held on the last day of the annual session in May, 1931. A meeting was called by the secretary on May 28, 1931, at which time Dr. L. R.

Woodward, of Mason City, was elected chairman and Dr. C. A. Boice, of Washington, was elected secretary. One informal meeting for a general discussion and four regular meetings have been held during the year.
The duties of each Councilor in stimulating the zeal of the county societies of his district have been unusually well performed, as their reports will show. The report of Dr. Boice from the eighth district is of special value and shows what can be done in a constructive way in stimulating county societies.
The Council has fostered the organization of Woman's Auxiliaries to county societies. Several are now in the process of being formed.
Following the expressed desire of our president, Dr. Smith, in addition to the officers' conferences held in each district, each of the Councilors has held or will hold a district meeting in his district. Meetings have already been held in the second, sixth, ninth, tenth and eleventh districts and have proved very beneficial.
As a Board of Censors, the Council has not been called upon to take final action in any case. The difficulty in Monroe County which is of long standing, was discussed but left entirely to the discretion of the Councilor of the ninth district. Similarly, the trouble in Dubuque was left to the Councilor of the seventh district. The Councilor of the eighth district reported that a member of the Louisa County society was doing unethical work, but this member voluntarily resigned from the society.
The Council was petitioned by the Twin Lakes society and the Austin Flint-Cedar Valley Medical Society to investigate the operation of the Great

Western Insurance Company and the Polyclinic Hospital. This matter was left to the Councilor of the fifth district for action by the Polk County Medical Society.

The Council has taken a forward step in forming a Public Relations Committee, which "shall establish sustained working relations with other agencies concerned with related activities." This committee is composed of Dr. W. W. Pearson, Dr. F. P. Winkler, and Dr. J. G. Macrae. The Council feels that this should be a permanent committee of the state society to maintain harmonious relations with all organizations having a health program.

The necessity for having a committee of this kind became manifest in connection with the new Bureau of Maternity and Child Hygiene of the State Department of Health. After discussing this matter at two meetings, the Council voted unanimously to cooperate with the State Department of Health because the Commissioner of Health was acting in an ethical manner and seeking medical rather than lay control of this work.

The Iowa Tuberculosis Association asked for cooperation in the Christmas seal sales. This matter now rests with the Public Relations Committee.

Governor Turner asked for cooperation in obtaining publicity concerning the tuberculin testing of cattle and the Council voted to cooperate.

The National Food Bureau is disseminating ethical literature combating food fads and the Council voted cooperation in this work.

The American Society for the Control of Cancer has literature for distribution in the state. A committee composed of Dr. Wm. Jepson, Dr. W. W. Bowen and Dr. F. M. Fuller has been appointed to censor this literature and any other literature arising from lay organizations. Arrangements have been made for the distribution through the State Department of Health of any literature which is found to be ethical.

The advisability of publicity in the newspapers has been discussed at two meetings, and a committee consisting of Dr. C. A. Boice, Dr. E. M. Myers and Dr. D. J. Glomset has been appointed to consider this matter, as well as the method and manner of its distribution.

The Nurses Training Committee has been continued and questionnaires have been sent out to collect facts on the nursing situation in Iowa. The committee is not ready to report on the facts that have been found.

The Council has had a report from the Speakers Bureau at each meeting and has formally approved of its work. A detailed report of the work appears elsewhere. At the last meeting, Dr. Glomset tendered his resignation as chairman of the Speakers Bureau Committee and the Council extended to Dr. Glomset a vote of commendation for the work that he has done.

In cooperating with the Committee on Public Policy and Legislation, the Council has voted favorably on the three major changes in the Perkins, Haskell-Klaus law, which are: (1) a board of physicians must

certify the admission as a medical necessity; (2) the board of supervisors must determine the indigency of the patient, thus binding them to care of the patient after hospitalization; (3) part of the per diem cost per patient should be charged back to the county.

The Council also cooperated with this committee in a consideration of the Shoulders Resolution in regard to the care of veterans. This is an extremely important problem, since it involves a threat of state medicine. The Council voted to support the bill at present in Congress authorizing the care of veterans in civilian hospitals.

In cooperating with the Committee on Constitution and By-laws the Council has voted unanimously in favor of Article VI of the model constitution handed down by the American Medical Association, which is as follows: "The Council shall be the Board of Trustees of this Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into session as provided in the Constitution and By-laws. It shall consist of the Councilors, the President, the President-elect, and the Secretary-Treasurer of the Association. Seven of its members shall constitute a quorum."

It is the opinion of the Council that this is the important change which should be made; all other changes are of secondary importance.

The Council is working on an outline for the organization of the committees of the state society which will enormously expedite the handling of all matters which come up. It is also considering the feasibility of having a committee of the state society to formulate a plan of cooperation with the American Society for the Control of Cancer during its activities in Iowa.

L. R. Woodward, Chairman.

Dr. Woodward, having no further report to make, moved that the report of the Council, as printed in the handbook, be accepted. The motion was seconded and carried.

REPORTS FROM COUNCILOR DISTRICTS

First Councilor District

The nine county societies in this district are all organized and functioning, those in Floyd, Bremer, Fayette, Chickasaw and Winneshiek counties having the largest number of meetings. The other county societies, Allamakee, Mitchell, Clayton and Howard have had one or more meetings during the year.

The Fayette and Clayton county societies have united with two societies in the Seventh Councilor district, in conducting a Study Center which meets once a month, each member reading a paper or giving a case history at least once a year. Outside men have presented papers at various times and from the interest displayed in discussion of papers and the attendance observed by your Councilor, this arrangement is proving very profitable to the men in these four counties as well as to many men in adjoining counties.

There have been several other joint meetings in the district with large attendance and very good programs; in fact, these have prevailed in such good measure that I feel all physicians in this district have had an opportunity to attend as many meetings as their time would allow. Chest clinics have been held in some counties with a good attendance and much interest. The president, secretary and other state officers have attended many of these meetings, and the physicians of the district are grateful to them for information furnished relative to organized medicine in Iowa.

One district meeting of all the county officers in conjunction with the state society officers was held in November. The attendance was large and a free and open discussion of state society activities was asked of all present.

A meeting of all members in this district will be held on April 20 to give opportunity to every member to express any opinions he may have on present or future organized medicine in Iowa.

All things considered, it is your Councilor's impression that this district is in a normal, healthy condition, and that the members are seriously interested in the continued advancement of organized medicine in Iowa. All state and county society officers and members have kindly cooperated whenever asked during the past year, for which I am deeply grateful.

F. A. Hennessy, Councilor.

Dr. F. A. Hennessy reported an harmoniously functioning district. He stated that during the year three men in the district who had practiced medicine for fifty years had been granted honorary memberships, and asked that these men be granted life memberships in the State Society: C. W. Duffin, M.D., of Guttenberg, and F. J. Kriebs, M.D., of Elkport, in Clayton County, and H. S. Hadsel, M.D., of Elgin, in Fayette County.

Dr. Hennessy moved that his report be accepted as printed in the handbook, and that the request for life memberships be included. The motion was seconded and carried.

Second Councilor District

All of the county society officers were visited during the summer of 1931 to ascertain the conditions in the societies and to inform them of the assistance to be had from the state society.

Wright County was visited upon invitation. Kossuth and Hancock-Winnebago Societies were visited in connection with a chest clinic. Invitation to meet with Franklin County was received, but the Councilor was unable to attend. All meetings of the Cerro Gordo County Society have been attended except one. The state society activities were freely discussed.

A district meeting was held at Garner on January 28. A combined scientific and business session was held. The program at this meeting was arranged by the Speakers Bureau. Those present expressed the desire to have about four meetings yearly. Women's Auxiliaries to the county society are being organ-

ized in Hancock-Winnebago and in Cerro Gordo counties. Another district meeting is to be held in April.

L. R. Woodward, Councilor.

Butler County. All eligible members paid up but one. Meetings are irregular. Physicians of the county prefer to attend meetings in adjoining counties. Are favorable to district society. County poor handled by individual physicians.

M. B. Call, Deputy Councilor.

Cerro Gordo County. All eligible physicians in the county but two belong to the county society. Two deaths in the county during the year. County poor handled by contract with the board of supervisors on a fee basis. Meetings monthly except in July and August.

S. A. O'Brien, Deputy Councilor.

Franklin County. All eligible members belong to the county society. One new doctor in the county. No definite contract for handling the county poor. Three or four meetings yearly. Favorable to district society.

W. K. Long, Deputy Councilor.

Hancock-Winnebago Counties. Three eligible physicians in the county who do not belong to the county society. Three doctors have moved out of the county and two new doctors have located in the county. Have four meetings a year. Poor handled through the board of supervisors.

W. F. Missman and G. F. Dolmage, Deputy Councilors.

Humboldt County. Several of the doctors in this county live near the county line and belong to neighboring societies. One eligible physician does not belong to the society. Each doctor takes care of the county poor in his territory. Have four meetings yearly. One death this year. Favorable to district society. One irregular practitioner in this county who caused considerable trouble but he has finally been disposed of to everybody's satisfaction.

W. M. Shipley, Deputy Councilor.

Kossuth County. Four eligible physicians do not belong to the county society. Three new physicians have located in the county. After having considerable difficulty, they have finally secured a satisfactory contract for caring for county poor on a fee basis.

W. T. Peters, Deputy Councilor.

Worth County. All physicians in the county belong to the county society. Scientific meetings are difficult because of the small number of physicians and they attend neighboring county society meetings.

S. S. Westly, Deputy Councilor.

Wright County. All eligible physicians belong to the county society. One physician has moved out of the county. Have just adopted a contract for taking care of the poor on a lump sum basis. This pays all the fees of the members and promotes unity in the society. Have monthly meetings with business and medical programs.

G. E. Schnug, Deputy Councilor.

Dr. L. R. Woodward moved that his report be accepted as printed in the handbook. The motion was seconded and carried.

Third Councilor District

The new Third Councilor District appears to be in a very healthy condition, judging from the reports of the various county societies. It has been my pleasure to visit all but two counties during the past year. I was greatly impressed by the interest manifested in scientific medicine, as well as in legislative matters pertaining to the Iowa State Medical Society. While the depression has been felt, it in no wise detracted from activities, such as regular meetings and chest and heart clinics. Most of the counties report favorably on advanced dues, knowing this was necessary to continue the activities of the state society as it has been carried on the past three years.

The Third District is not favorably impressed by the newly created Bureau of Maternity and Child Hygiene. The medical profession of this district sees no need for such a law and would veto a renewal of said law at its expiration.

The counties comprising the Third District are all comparatively small, in point of members. The majority of the societies meet quarterly. A few meet monthly, and one county society has had only one meeting in 1931 and this was to elect officers for the ensuing year.

The O'Brien County Medical Society invited the Speakers Bureau to help them put on a short course of twenty lectures, by the Medical Department of the State University. Thirty-two members subscribed to this course and a very fine interest was shown throughout. The doctors attending this course came from a large radius about Sheldon.

One district meeting of the Third Councilor District was held at Spencer, September 29. A good representation from all the nine counties were in attendance. Dr. L. R. Woodward, chairman of the Council, was present, as were also Dr. Parker and Mr. Vernon Blank. A very fine spirit prevailed. Resolutions were unanimously adopted endorsing the present administration in all of its activities.

The fall meeting of the Northwest Iowa District Medical Society was held on October 27, with thirty-seven members present. The program consisted of a paper by Dr. H. L. Smith, of The Mayo Clinic, Rochester, Minnesota, on "Coronary Thrombosis." Hon. O. J. Ditto, representative from Osceola county, gave a paper on "Medical Legislation as Introduced in the Forty-Fourth General Assembly." Dr. Channing G. Smith and Mr. Vernon D. Blank gave complete statistics on the Iowa State Medical Society's program.

The only change of location reported to date is that of Dr. George Boetel, of Rock Rapids, who sold his practice to Dr. K. A. Sporre, of Harris. Dr. Sporre will move to Rock Rapids in April and Dr. Boetel expects to move to Omaha, Nebraska. Dr. H. B. Paulson, of Ocheyedan, is assuming Dr. Sporre's practice at Harris.

Dr. M. T. Morton, Deputy Councilor of Emmet county, reports that the Coleman Hospital, of Estherville, has been opened to the profession in general, under the direction of a hospital board.

Dr. Joseph C. Colleston, aged eighty-five years, at one time a member of the Clay County Medical Society, died of uremia on May 13, 1931, at his home in Whittier, California.

The Dickinson County Medical Society, Dr. C. S. Shultz, secretary, reports as follows:

"Our society has not sponsored any special activities other than looking to local arrangements for the summer meeting of the Upper Des Moines Medical Association. Number of meetings, eight, scientific in character; nine members have paid dues for 1932; one member's dues still unpaid. There was one death in our membership, Dr. Cassius Milo Coldren, of Milford. Two new doctors located in Dickinson county during the year, one in Spirit Lake and one in Milford."

No complaints have been filed with the Councilor during the year.

Frank P. Winkler, Councilor.

Dr. F. A. Winkler moved that his report be accepted as printed in the handbook. The motion was seconded.

The President called the attention of the House to the specific recommendation in the report of the third district regarding the Bureau of Maternity and Child Hygiene.

Dr. C. A. Boice moved an amendment to the original motion, that that part of Dr. Winkler's report referring to the Bureau of Maternity and Child Hygiene be referred to the Committee on Public Policy and Legislation. The motion was seconded and carried.

Upon vote, the original motion carried.

Dr. Winkler moved that life membership be granted to Dr. W. W. Beam, of Rolfe, who had been in active practice for fifty years. The motion was seconded and carried.

Fourth Councilor District

In so far as your Councilor for the Fourth District has been able to ascertain, there has existed among the profession a deep interest in all matters pertaining to its welfare, not only in the district but in the state. This impression has been gained largely through the views and sentiments voiced at the district meetings which have been held during the year.

Two district meetings of the officers of the component county societies have been held during the year, one in Ida Grove and the other in Sioux City. The latter meeting was a conjoint meeting of the Third and Fourth Districts and proved to be highly satisfactory, judging from the number of professional problems considered.

There has been no professional friction in the district or, if so, it has not come to the attention of your Councilor.

William Jepson, Councilor.

Dr. Jepson moved that his report be accepted as printed in the handbook. The motion was seconded and carried.

Fifth Councilor District

On October 8 a meeting was held at Boone, with representatives present from every county society in the district except Calhoun. Dr. Thomas Burcham, chairman of the legislative committee of the state society, discussed the activities of the committee; its accomplishments and future program. Dr. Robert L. Parker, secretary of the state society, discussed the activities of the society and took up the question of expense, giving in detail a report of individual expenditures. The work of the Speakers Bureau and medical instruction given at different centers was explained. A committee was appointed to formulate plans for the organization of a district society; this committee was composed of Dr. Stahr, of Fort Dodge; Dr. Bush, of Ames, and Dr. Jones, of Boone.

Your Councilor attended the Boone-Dallas County meeting held at Panora on October 22. At this meeting, following the regular literary program, state society affairs and matters of local interest were discussed.

On January 21, your Councilor attended the meeting of the Dallas-Guthrie Medical Society at Adel. Following the literary program, Dr. Pringle, of Bagley, took an active part in discussing the advisability of care of the indigent sick of Guthrie County by county society contract. Largely due to his interest and energy along this line, Guthrie County is now among those having county society contracts for the care of the indigent sick.

At a called meeting of the committee, of which Dr. Stahr is chairman, the deputy councilors met on February 25 at Boone. All deputy councilors from the district were present except those from Greene, Dallas and Guthrie counties, and plans were discussed for a meeting to be held prior to the annual session of the state society. It is hoped that all of the counties within the district will hold meetings before the time of the annual session; the idea being to have the members of the different county societies, and especially their delegates, thoroughly familiar with the proposed society reorganization and legislative matters.

W. W. Pearson, Councilor.

Dr. W. W. Pearson, Councilor of the fifth district, was not in attendance.

Sixth Councilor District

Thirty-three physicians, officers of the county societies of the sixth district, sat down to a fine dinner in Toledo during the last part of October, after which a very free and frank discussion of the affairs of the state society ensued. The expenses of the state society, proposed changes in the Perkins, Haskell-Klaus law, the suggested amendments to the constitution and by-laws and other live and interesting subjects were canvassed. All were interested and a very fine spirit was shown. At the close of the evening a resolution endorsing the activities of the officers of the state society and the action of the House of Delegates was unanimously passed. All counties of the district were represented.

All the physicians of the district were requested to meet in Marshalltown, March 23, to discuss the affairs of the state society and to plan for the future of the medical society in the sixth district. President Channing Smith discussed the activities of the State Medical Society; Secretary Robert Parker spoke on the changes in the Perkins, Haskell-Klaus law; the Chairman of the Council, Dr. L. R. Woodward, mentioned some of the important questions that come before the Council. Many of the physicians took part in the discussion. A number of counties reported on their care of the indigent sick. The plan of having the county society contract with the board of supervisors was discussed and it seems that this arrangement is working very satisfactorily in many of the counties in the district. Eighty doctors were present, representing every county in the district.

The value of district meetings with a short scientific program, and with time for the discussion of any economic subject of interest to the district or any question of policy of the state medical society was agreed upon and a motion made and adopted that other meetings be held subject to the call of the Councilor of the district.

The meeting then adjourned to the dining room of the Hotel Tallcorn for dinner, after which a very fine address was given by Dr. Arthur Abt of Chicago on the subject, "Injuries of the New Born."

The sixth district Councilor has visited all the counties of the district, with the exception of Iowa County, and will probably meet the physicians of that county at the heart and lung clinic on April 15.

In all the meetings attended there was very evident friendliness and desire for cooperation. The programs were well planned and much interest was shown.

W. L. Hearst, Councilor.

Benton County: The Benton County Medical Society sponsored a heart and lung clinic in May, 1931, conducted by Drs. Peck and Glomset of Des Moines. Nearly all members of the county society were present with cases for examination and were more than satisfied. Following a dinner at the Country Club at Vinton, Dr. Glomset discussed "Certain Phases of Heart Conditions," and Dr. Peck "Tuberculosis in Childhood," and Dr. D. H. Kelly of Des Moines very ably discussed "Rheumatism in Children." Many of the nurses of the county and the office assistants of the physicians attended the dinner and discussions.

The membership in the county is active and working in harmony. This present year a few may drop out because of advanced dues but we hope all will later be reinstated.

Cedar Rapids and Waterloo hold such good medical meetings and the distance is so short and the roads so good that many of the doctors in the county attend these meetings.

J. E. Luckey, Deputy Councilor.

Black Hawk County: The Black Hawk County Medical Society meets quarterly. Two heart and lung clinics were held during the year. The dues of the members are paid out of the county contract

fund for those corporations holding such contracts, viz., Cedar Falls and Waterloo. The balance of physicians doing county service on an individual basis are required to pay individual dues. Black Hawk County is 100 per cent in membership in the state society. There has been an effort at house cleaning, both inside and outside of the profession, of those dabbling in the healing arts, with agreeable results.

At the January meeting of the society officers were elected and a definite stand taken supporting the state officers in their activities. There seemed to be a general feeling that we are getting much more for our money than formerly but that there was still reason for much desired improvement, and that with better interest and representation over the state there will be less opportunity for criticism and more interest taken in the society proceedings.

The physicians in the county are showing an increasing interest in the newly organized sixth district and it is hoped these meetings will continue.

Grundy County: During 1931 the Grundy County Medical Society held three heart and lung clinics, attended by all the physicians in the county. Membership was 100 per cent. These meetings were much enjoyed and proved satisfactory and very beneficial. Our county having only a few physicians, it is quite difficult for us to have interesting scientific meetings put on by our own membership so we are planning to have some outside men help in our county meetings.

The majority of our people live in the country and have been quite hard hit by financial depression. With our banking situation not quite normal, collections are poor and we are finding it difficult to secure our 100 per cent membership for 1932. We are making very strenuous effort to accomplish this.

M. H. Thielen, Deputy Councilor.

Hardin County: The Hardin County Medical Society has twenty-eight members, and includes all of the physicians in the county. The dues are paid from the society fund which is secured from the board of supervisors for taking care of the indigent sick. Hardin County was the first to use this method and it has proved very satisfactory. The board of supervisors is satisfied, the sick are well taken care of and the physicians of the county are pleased with this arrangement. The county has a very active society, with scientific and business meetings following a dinner every two months. The expense of the entertainment is taken from the society funds. The society exchanges programs with Marshalltown once a year and these meetings are very much enjoyed.

There is a fine feeling of fellowship existing among the members and all are very willing to cooperate with the state society in all of its activities.

W. E. Marsh, Deputy Councilor.

Iowa County: The Iowa County Medical Society has two regular meetings each year, one in June and the other in November. At the latter meeting officers for the ensuing year are elected. All but one of the physicians of the county are members of the

county society. There is one ineligible non-member. A heart and lung clinic will be held April 15, at which time it is hoped to have all of the physicians of the county present. I. J. Sinn, Deputy Councilor.

Jasper County: The Jasper County Medical Society holds regular meetings in Skiff Memorial Hospital in Newton. The meetings and discussions have been very profitable. The past year we have been making every effort to secure a contract with the board of supervisors for the care of the indigent sick and when this has been put through we expect to have a 100 per cent membership of the eligible men in the county.

J. W. Billingsley, Deputy Councilor.

Marshall County: The Marshall County Medical Society had an active year. A scientific program was enjoyed each month except the summer months. The following guest speakers gave excellent programs:

Henry Schultz, M.D., Chicago.

J. W. Dulin, M.D., Iowa City.

Sumner L. Koch, M.D., Chicago.

Walter H. Nadler, M.D., Chicago.

Charles Mayo, Jr., M.D., Rochester.

John Berkman, M.D., Rochester.

J. F. Herrick, M.D., Ottumwa.

Harry A. Collins, M.D., Des Moines.

Walter D. Abbott, M.D., Des Moines.

On invitation of our society, our state officers, Drs. Channing Smith, Robert Parker and Edward M. Myers, with Vernon Blank, gave us an evening of state society business. It was a profitable meeting and our society gave their program for 1932 unanimous approval.

Councilor W. L. Hearst has been a frequent visitor to Marshall County.

All active practitioners in Marshall County are members of our county and state societies.

R. S. Grossman, Deputy Councilor.

Poweshiek County: The meetings of the Poweshiek County Medical Society alternate between Grinnell and Montezuma, meeting every other month. Our membership is 100 per cent and has been for some years, ever since we contracted with the board of supervisors for the care of the indigent sick. Poweshiek County early adopted this method, which has proved very satisfactory and has helped unite the profession in helpfulness and cooperation. Our scientific programs have been good and well received. They are sometimes conducted by our own membership and sometimes by men from Cedar Rapids, Iowa City, and elsewhere.

E. E. Harris, Deputy Councilor.

Tama County: There are twenty-nine physicians in the county, twenty-four are members of the county society; two eligible non-members; two not in practice; one not eligible. Meetings were held in December, February, April, June, September and November. The three last meetings in 1932 had an attendance of nineteen. The meetings have been well attended and interesting subjects discussed, with a very good feeling existing among the members. This

year the county society has contracted with the supervisors to take care of the indigent sick in the county for \$2,000, and this is to be turned over to the county society from which the membership dues and entertainment expenses will be paid.

The physicians, dentists, veterinarians and nurses of the county held a joint meeting at the invitation of the county medical society at the Country Club in September. Dr. Byrnes, veterinarian, gave a fine talk on "Tuberculosis in Animals." This get-together was voted a success and it is hoped that other similar meetings will be held.

A. A. Pace, Deputy Councilor.

Dr. Hearst reported that the members of the sixth district had worked in harmony and that there was no friction in the district. There had been no deaths in the district since the sixth district report was printed. Dr. Hearst moved that his report, as printed in the handbook, be accepted. The motion was seconded and carried.

Dr. E. B. Williams moved that life membership in the State Society be granted to Drs. E. F. Talbott, of Grinnell, and J. H. Phillips, of Montezuma. The motion was seconded and carried.

Seventh Councilor District

All the county societies in the seventh district have held meetings during the year. The number of members in the Cedar and Jones county societies is small, and these societies have not held scientific meetings. However, the members have attended the meetings in the adjacent counties, Johnson and Linn.

The members of the unit societies have seemed to show more than the usual amount of interest in the activities of the state society. An effort has been made, by questionnaires and oral inquiries, to learn the opinion of the individual members in regard to various problems affecting the state organization. The information thus accumulated has been given to the delegates representing the district.

The officers, delegates, and deputy councilors of the unit societies in the district have met together on two occasions. The first meeting, held at Anamosa, was attended by the state officers and many of the problems of the society were seriously discussed. No set program was attempted at the second meeting, and the available time was almost entirely devoted to the development of the social and humanistic aspects of the practice of medicine.

Arthur W. Erskine, Councilor.

Dr. Erskine asked permission to read the following supplementary report:

Buchanan County: The Buchanan County Medical Society has a membership of sixteen. There are three or four physicians in the county who are not members. There are four meetings a year, at each of which a dinner is given by one-fourth of the membership. At the last meeting the board of supervisors was entertained along with the clerk of court, the county auditor, county attorney, and the overseer of the poor. One meeting is devoted to a chest and lung clinic. The members of the county society

make up the staff of the Peoples Hospital and hold a meeting each month as a staff. The attendance at the meetings is very good. The society lost one member in the past year. There is no contract with the county, but a schedule of fees has been approved by the society and the supervisors. The county pays the hospital \$1,200 per year for the care of the poor, but the doctors receive nothing for work done in the hospital. This arrangement with the hospital has been in operation for a number of years.

C. W. Tidball, Deputy Councilor.

Cedar County: The society has held no scientific meetings, but a majority of the members have attended the meetings of the Linn and Johnson county societies. No members have been lost.

E. J. Van Metre, Deputy Councilor.

Clinton County: The membership totals thirty-eight. There are three new members. One member failed to pay his dues, so there is a net gain of two. Meetings are held monthly and consist of a short business session and a program. There is usually a speaker from outside the county. As a rule the attendance is good, at least three-fourths of the members being present. A number of visitors attend the program meetings. Business meetings are sometimes called between the monthly meetings for the discussion of various problems.

Last year a contract was made with the county by the Clinton County Medical Society, Incorporated, but this year the contract was given to an individual physician who made a lower bid than the society.

R. T. Lenaghan, Deputy Councilor.

Dubuque County: The society has held ten regular meetings, one postponed meeting and six special meetings. The average attendance has been twenty-seven per cent of the membership. There are fifty-three active, and two honorary members. There has been a gain of two in the membership in the past year. The interest in meetings is good if a speaker from a distance presents the program, but only fair if a local man reads a paper. No county contract is in force. The work is done by one physician who calls on members for assistance when necessary.

F. P. McNamara, Deputy Councilor.

Johnson County: Number of meetings held, ten; programs: seven programs by members of the society; two by guest speakers; one social meeting, no program; attendance: average attendance, 80 members and nine guests; membership: 102 senior members, 27 honorary or junior members; members lost during the year: 12 senior members, 10 junior members; members added during the year: two senior, three junior. Total net loss for the year, 17.

The society has no county contract, the poor being cared for by single county physicians.

In 1932 we have had four meetings with an average attendance of 74 members and three guests.

Programs: The programs have all been given by members of the society.

Dues: Senior members whose dues are paid this

year, 83; junior members whose dues are paid for this year, 31.

Members lost: One by resignation, two by removal, two by death, two by changing from senior to junior membership. Five are delinquent.

New members: Members added since January first, three senior and six junior.

Geo. C. Albright, Deputy Councilor.

Jones County: There have been two business meetings. No scientific meetings have been held. About half the members are non-resident members of the Linn County Medical Society. The society has lost three members in the last year. There is no county contract in force. The poor are cared for by individual physicians according to a schedule of fees which has been approved by the society.

T. M. Redmond, Deputy Councilor.

Linn County: It has been the aim of the officers of the society to so diversify the programs that the various branches of medicine be represented. Accordingly the following doctors have appeared on these programs:

S. Marx White, M.D., Minneapolis, Minn.; Isaac A. Abt., M.D., Chicago, Ill.; Sanford A. Gifford, M.D., Chicago, Ill.; Paul A. O'Leary, M.D., Rochester, Minn.; M. Edwards Davis, M.D., DeLee Clinic, Chicago, Ill.; Fred Smith, M.D., University of Iowa, Iowa City; Arthur Steindler, M.D., University of Iowa, Iowa City; Col. Geo. Skinner, M.D., Omaha, Nebr.; Carl R. Moore, Ph.D., University of Chicago, Chicago, Ill.

Members of the Linn County Medical Society were appointed to discuss the subjects of the above papers as were members of other county societies. The society holds nine meetings each year, beginning October 1. The average attendance was 128. The membership is 91, of which three are new members this year. In addition, there are 18 non-resident members. Membership in the past year has been reduced by one resignation and one loss by death. Membership dues have been paid 100 per cent for the coming year. The following plan relative to Perkins, Haskell-Klaus patients is pursued: Patients procure papers from the court on Monday, following a hearing as to their residency and indigency. Only emergency cases are heard on other days. Patients are referred to a central place for examination. Members of the society desiring to examine patients, are called in turn by the secretary. Payment for all examinations is sent to the secretary, who in turn sends it to the treasurer. The treasurer remits one dollar to the doctor for each examination made, retaining four dollars for the society. The treasurer and secretary receive nominal salaries for their services.

The Linn County Medical Society has an understanding with the supervisors of Linn county under which the members care for indigent and deserving cases according to an agreed schedule of fees. All cases must first be investigated and certified as to indigency and residency by the overseer of the poor.

All cases for investigation must be referred to the office of the overseer of the poor in the first twenty-four hours.

New county cases without a family physician are given to the men in rotation, as nearly as possible.

L. M. Downing, Deputy Councilor.

Replies to a questionnaire submitted to the members of the county societies in the district show that ninety-two per cent of those who replied believe that the unusual activities of the state society which necessitated a temporary raise in dues were justified by their results. Fifty-five per cent favor keeping the dues next year at \$7.50. Forty per cent favor raising them to \$9.00, five per cent to \$12.00. Seventy-five per cent believe that the society should continue to employ a lay director and twenty-five per cent believe that the managing director should be a physician not in practice. Seventy-two per cent favor revising the constitution of the state society so that the functions of the Trustees may be assigned to the Council. Ninety-five per cent favor having Councilors elected by the delegates from their own district only, instead of by the entire House of Delegates.

Dr. Erskine requested that life membership in the state society be granted to the following members: J. B. Kessler, M.D., J. T. McClintock, M.D., and E. W. Rockwood, M.D., of Iowa City, in Johnson County; Kate A. Mason Hogle, M. D., Mount Vernon; Edwin Burd, M.D., Lisbon; and C. B. Clark, M.D., Cedar Rapids, in Linn County; George Hofstetter, M.D., Clinton, in Clinton County; D. N. Loose, M.D., Maquoketa, in Jackson County.

Dr. Erskine moved that his report as printed in the handbook, as well as his supplementary report, be accepted. Motion was seconded and carried.

Eighth Councilor District

Washington County. Population 20,000. Twenty-two active physicians, all members of the county and state societies and the American Medical Association, three elderly, non-active physicians, none in need. There are also six practicing osteopaths and six practicing chiropractors (besides a dozen or more not in practice) in the county. The society meets ten times a year, has good programs, good attendance and excellent society spirit. It has a contract with the county paying \$1,800.00; 40 per cent of which is reserved for society expenses and the balance prorated according to a standard fee bill. The county health unit cooperates closely with the county society. There have been no deaths during the year and two new physicians have located in the county. A Woman's Auxiliary is a part of the organization.

E. E. Stutsman, Deputy Councilor.

Van Buren County. Population 12,600. Twelve active physicians, all in the county and state societies except one. There are no non-active, ineligible, needy, or new physicians in the county, and there were no deaths during the year. There are four osteopaths and two chiropractors in the county. So-

ciety spirit is good, meetings are held at call of officers. The society has a contract with the county calling for \$1,400.00, 25 per cent of which is reserved for society expenses, the balance prorated according to an adopted fee bill. C. R. Russell, Deputy Councilor.

Jefferson County. Population 16,240. Twenty active physicians, of whom fifteen are in the society. The five delinquents are eligible and have not made application nor been solicited. There is one ineligible, none retired, none in need, two new physicians in the county, and one has died. One osteopath and six chiropractors are also in the field. Society spirit is fair, with meetings monthly except during the summer. The contract concerns only the city of Fairfield, and is for \$1,600.00, from which state dues and malpractice protection are paid and the balance prorated. Ira N. Crow, Deputy Councilor.

Louisa County. Population 11,575. Fourteen active physicians, all members of the county and state societies, no ineligibles, none in need, three inactive elderly men. One death (Dr. D. J. Higley of Grandview), one new physician. Two osteopaths and one chiropractor. Society spirit excellent, meetings twelve times a year, an active Woman's Auxiliary. Contract pays \$900.00, and all dues are paid for the members. J. R. Chittum, Deputy Councilor.

Muscatine County. Population 29,385. Twenty-six active physicians, all members. No delinquents, one ineligible, none retired, one death (Dr. A. J. Weaver), no new physicians. Society spirit is good, harmony is fair, scientific interest is enthusiastic, meetings are irregular but promise greater activity, a move has just been made to organize a Woman's Auxiliary. The contract calls for \$3,600.00. Dues are paid. There are three osteopaths and seven chiropractors in the county. T. F. Beveridge, Deputy Councilor.

Henry County. Population 17,760. Twenty active physicians, three of these connected with the State Hospital, eight have paid up and twelve are delinquent, due to bank closing, but the secretary hopes to bring these all in soon. There are no ineligibles, no retired, none in need. There was one death (Dr. Smith of Mt. Pleasant), and two new doctors during the year. The contract is based on a flat fee bill and amounts to about \$2,500.00 per year. Ten per cent is held out for society expenses. There are two osteopaths and three chiropractors. Meetings are regular and society spirit is good. W. A. Sternberg, Deputy Councilor.

Des Moines County. Population 38,162. There are forty-nine physicians in the county, forty-two of them in Burlington. Twenty are paid up and twenty are delinquent at present, due largely to a closed bank. There are two non-eligible men, none in dire need, two retired men. Three men have located here during the year, Dr. Suggett to replace Dr. Jordan in the Health Unit (Dr. Jordan has returned to the State University), and Dr. Kunz to replace Dr. George at the C., B. & Q. shops, and Dr. Ober. There

are five osteopaths and six chiropractors in the county. Meetings are held regularly, interest is excellent. There are five eligible non-members. The society does not have a contract, but does take an active interest in the Health Unit, Dr. Crow being the permanent chairman. Drs. C. H. McGee and A. B. George have retired on account of ill health, and as both have been in the society for more than thirty years, will be recommended to the House of Delegates for life membership. Through the zeal of Dr. H. B. Young, the grave of Dr. James, an early Des Moines County doctor, was located in a country cemetery and properly marked. John T. Hanna, Deputy Councilor.

Lee County. Population 41,268. Fort Madison has fifteen active physicians, all in the society, four retired, no ineligibles, no delinquents, none in dire need, no deaths, one new physician (at the Santa Fe Hospital). Society spirit poor, meetings irregular. Five osteopaths, and three chiropractors in the city. The city physicians have a contract paying \$2,000.00 per year, and dues are paid therefrom. R. L. Feightner, Deputy Councilor.

Keokuk and all Lee County outside Fort Madison. Twenty-seven physicians, of whom nineteen are paid up. The eight delinquents are due to lack of money, time or disposition. There are four ineligibles, none retired, none in need, no deaths, one doctor in Keokuk. Meetings are held quarterly, interest is good. There are four osteopaths and four chiropractors in Keokuk. Semi-annual clinics to be held by local men or guests are suggested to increase interest. F. M. Fuller, Deputy Councilor.

Scott County. Population 77,332. There are ninety-five physicians in the county, of whom seventy-seven are paid up, twelve are delinquent on account of the present financial upset, five are ineligible, one is retired. There are none in need. Two doctors have located here during the year; there are also six osteopaths and twelve chiropractors in the field. Society spirit and regularity of meetings are one hundred per cent. There have been no deaths. The contract with the county pays \$15,000.00. The society provides services for the indigent and conducts a clinic for venereal cases and also for children. The plan is considered very successful. For a number of years the society has paid the expenses of the delegates to the annual meeting of the House of Delegates. A. P. Donohoe, Deputy Councilor.

SUMMARY

The nine counties comprising the Eighth Councilor District make an area of 4,091 square miles and accommodate a population of 264,108, with about 298 physicians, an average of one physician to each 900 of the population. The figures for Iowa are one to 769. In addition there are 38 osteopaths and 50 chiropractors who hold themselves out for practice. The density of the physicians according to population varies from one to 476 in Davenport (one to 590 in Scott county) to one to 1,000 in two or three of the

counties having no large towns. A careful survey shows that the district is well supplied with physicians, but 14 have located here during the year. There are 13 ineligible, 13 retired or inactive men, none in dire need. There have been 4 deaths. Jefferson, Washington and Henry counties have a tri-county organization, meetings are held in each county once a year; each of these counties has a county hospital. Washington and Des Moines counties have Health Units. Washington, Louisa and Muscatine counties have auxiliaries. All the societies meet frequently, interest is good and harmony the rule. Seven of the county societies and the city of Fort Madison have contracts; the total of these contracts is \$28,800.00. The societies have been asked as to the practicability of paying the necessary expenses of the delegate to the annual meeting, and some of them are already doing so. Letters have been sent to several of the ladies in most of the counties (names furnished by the deputy councilor) urging the organization of an auxiliary. Each of the deputy councilors has done excellent work. The South East Iowa District Society has always embraced the First District; an amendment to the constitution naming the nine counties will doubtless be carried at the next meeting, adding it in effect to the Eighth Councilor District Society. Practically all the delinquents are due to disturbed banking conditions. The Councilor has traveled 3,827 miles during 1931 in the interests of the society.

C. A. Boice, Councilor.

Dr. Boice asked that the name of Dr. W. A. Sternberg, deputy councilor, omitted in the handbook, be added to the report from Henry County. He also asked that Drs. C. H. Magee and A. B. George of Burlington be granted life membership in the State society.

Dr. Boice moved that his report as printed in the handbook, and the two supplementary requests be accepted. The motion was seconded and carried.

Ninth Councilor District

The activities of the Councilor of the ninth district began May 28, 1931, with attendance at the session of the Council for its organization.

The first county society meeting attended was at Pella, at which the report of the delegate from Marion County was read to that county society. This report was freely discussed that night and it has since received considerable attention throughout the state, inasmuch as a copy was sent to each county society and each state officer. Meetings have been attended in all counties of this district except Mahaska and Monroe counties.

A meeting of the officers and deputy councilors of the component societies in this district was held at the Ottumwa Country Club in September, at which time great interest in state society matters was evidenced by all present and arrangements made for a general district meeting, which was held at Albia, October 15, 1931. There were fifty-seven members present.

A conference of the state society officers with the

officers of the component societies was planned for November 5, at Ottumwa. Due to the interest evidenced by the general membership the plans for this were extended to include the general membership of the district and forty-seven members were present.

There has been evident a great deal of dissatisfaction with the raise in dues to \$12.00 for the year 1932, and this has resulted in some loss of membership. The exact figures on this loss are not available at the time of rendering this report.

A meeting of the deputy councilors was held at Ottumwa on March 8, at which time plans were made for a final district meeting for April 20 at Centerville, when the principal matters which will be presented to the House of Delegates at the Sioux City meeting will be discussed for the benefit of the membership at large and in order that the component county societies may properly instruct their delegates as to their wishes and desires.

The situation in Monroe County has not materially changed. However, in accordance with the sentiments of the new Council of the State Medical Society, the matter is to be referred first to the Councilor of this district should any inquiries be made of the central office of the state society. Up to this date there has been no formal request, either from the county society organization or from any of the physicians of this county.

While there are still many unsettled questions within the district, it has been felt that the interest displayed on the part of the general membership and the spirit of cooperation, and the willingness to work displayed by the various deputy councilors, will result in general benefit to the district.

This has been a difficult year throughout the state and in the ninth district in particular, and it is a matter for gratification that as much satisfactory organization work has been accomplished. It is hoped that the practice of having district meetings can be continued and that these meetings will receive the support of the membership of the component societies, and that in this manner delegates attending the annual sessions may more directly represent the desires of their societies.

H. A. Spilman, Councilor.

Dr. Spilman stated that at the time his report was made, no appeal for assistance from the Council had been made on the part of the Monroe County physicians, protesting the action of the secretary of the Monroe County Medical Society in refusing their dues. As Councilor of the district, he felt that in a matter which had engendered so much hard feeling for so long a time, he should not attempt to pass judgment, and that the matter would therefore be referred to the Council as a whole.

Dr. Spilman moved that his report as printed in the handbook, and his supplementary report, be accepted. The motion was seconded and carried.

Tenth Councilor District

Activities in the counties comprising the Tenth District have, for the most part, greatly exceeded

those in past years, both as to county meetings and joint meetings between several counties.

At a meeting held in Creston in September a Tenth District Society was organized for the purpose of bringing the county societies into closer relation with the state society and to conduct from time to time scientific meetings of varying character. A second meeting was held in March at which problems confronting the profession were discussed at length.

During the early winter a University Extension Course was conducted at Leon in Decatur County. It was well attended and the expressed desire for a repetition is its best recommendation.

As to individual county activities: Adair, Adams and Clarke counties report two or more meetings during the past year. Decatur County, aside from the University Extension Course, conducted in the early winter, has held several county meetings. Madison reports monthly meetings with local and outside talent. Ringgold reports five meetings and has joined with Clarke and Decatur in several joint meetings. Taylor, aside from the joint meetings, has held several county meetings. Union reports monthly meetings and a chest and heart clinic conducted by the state society. Warren reports several meetings.

There has been no expression of dissension throughout the district and the membership remains practically the same as last year.

James G. Macrae, Councilor.

Dr. Macrae requested that life membership in the State Society be granted to Dr. F. E. Sampson, of Creston, and Dr. G. I. Armitage, of Murray. Dr. Macrae moved that his report, as printed in the handbook, with the supplementary request, be accepted. The motion was seconded and carried.

Dr. Spilman moved that life membership in the State Society be granted to Dr. H. C. Finch, of Pulaskee, and Dr. Clara L. K. Cronk, of Bloomfield. The motion was seconded and carried.

Eleventh Councilor District

All the component medical societies of the Eleventh District had regular and special meetings during the year. These meetings were scientific and economic in nature.

A postgraduate course, offered by the state medical society, was held at Red Oak, Montgomery County, in which members of other county societies participated. They reported it to be a success; so much so, in fact, that they are contemplating repeating it next year. Other counties put on clinical programs which were under the auspices of the members of various local societies and visiting physicians and surgeons from within and out of the state. At a meeting of the Mills County Medical Society, held at Glenwood in June, a Woman's Auxiliary was organized.

During the year there were two Eleventh District meetings held in Council Bluffs. One, in September, was attended by the officers and deputy councilors of the Eleventh District, at which time the present pro-

gram of the Iowa State Medical Society was thoroughly outlined and discussed, and resolutions passed commending and approving the program as outlined. The second meeting, held on March 10, at the Chieftain Hotel, was a general meeting to which all members of the various component societies were invited. The program was purely economic in nature and was presented by President Channing Smith, Secretary Robert L. Parker, Managing Director Vernon Blank, Councilor A. V. Hennessy and Dr. F. E. Bellinger, who acted as presiding officer. The attendance was very gratifying as every county was represented and there was a total attendance of 79, exclusive of the speakers, which exceeds fifty per cent of the membership of the society in this district. After the speakers had delivered their talks, there was a general discussion by the members which was interesting and enlightening. A resolution was made and passed at this meeting endorsing and approving the present activities of the Iowa State Medical Society and also recommending that dues remain at \$12.00 for the ensuing year.

A. V. Hennessy, Councilor.

In the absence of Dr. Hennessy, Dr. F. E. Bellinger read the report of the Councilor for that district and moved that the report as printed in the handbook be accepted. The motion was seconded and carried.

Dr. Woodward moved that life membership be granted to Dr. A. J. Cole, of Clear Lake. The motion was seconded and carried.

REPORT OF THE BOARD OF TRUSTEES

House of Delegates, Iowa State Medical Society:

Of the many worthy purposes of the Iowa State Medical Society, "the advancement of medical science, the elevation of the standard of medical education and the enactment and enforcement of just medical laws, the guarding and fostering of their material interests, and the enlightenment and direction of public opinion in regard to the great problems of state medicine," have been the aims which have received special consideration and constitute the outstanding achievements of the past year.

While these notable accomplishments have been gratifying and due, in a large measure, to the progressive and far-sighted action of the House of Delegates, there has, at the same time and by the same acts, been placed on the Board of Trustees the grave responsibility of fulfilling the instructions of that body.

Accepting the popular assumption that we are merely the trusted commissioners of the Society, delegated the duty of executing the acts of the House of Delegates, we have conducted our deliberations as a Board according to our best judgment and with earnest consideration of every transaction, respecting at the same time, the financial resources at our disposal. We have not been insensible to the fact that the tension of these depressive times has resulted in sharpness and irritation in business and professional contacts which, doubtless, has been responsible for much of the criticism directed toward the administrative acts of the Trustees.

While we feel that this criticism, not prevalent but sporadic, has been unwarranted, we are also inclined to the belief that many of the extravagant statements were made without full knowledge of the true facts or adequate conception of the extent and cost of the various activities which have been projected and authorized by the House of Delegates.

While we appreciate the fact that the constitution and by-laws give the Board of Trustees abundant authority as an executive body, we have regarded it our mandatory duty and therefore it has been our consistent purpose, to conduct our transactions only in accord with the expressed wishes of the Society, for we are keenly aware of the fact that were we to become dictatorial it would result in perversion of the endowment of the Board of Trustees and it would cease to be of value as an interim executive body.

It has been most difficult to execute the official orders of the House of Delegates in a manner satisfactory to all, with the available funds at our command. The various standing and special committees have been, almost without exception, unusually active. This has resulted in extra and unforeseen expenses. Although sensitive to the criticism of unwarranted expenditures, nevertheless we felt in every instance that the results obtained more than justified the cost, and after earnest and thoughtful consideration, we gave our support to these activities.

In our desire to clarify the atmosphere of dissatisfaction clouded by erroneous impressions, by acquainting the members with true facts concerning expenditures, their purpose and the department to which charged, we gave our approval as well as personal effort to the public exposition, through editorials, special articles, printed statements, graphic charts and addresses by state society officers at district and county meetings at which constructive criticisms and suggestions were earnestly sought. That these efforts have been fruitful in clearing the mists of misconceptions of true facts, is evidenced by the many resolutions of confidence and commendation passed by county and district societies.

To any student of economics it is apparent that a balanced budget is essential to any organization if it is to enjoy continued prosperity. This fact has been very forcibly brought to our attention in our country's financial crisis. In a similar way, the principle applies to our State Society. We cannot progress without financial provision for progressive measures. The problem of conducting a progressive program of activities, as authorized by the House of Delegates, at the same time maintaining financial resources of stability and adequate measure, is one of great magnitude, demanding serious consideration and prophetic vision on the part of the House of Delegates, which, in fact, is the sole arbiter in determining how strong, how progressive and how comprehensive our State Society activities shall be.

In this connection it appears relevant to interpolate as a word of caution, the enthusiastic endorsement of measures without due consideration of the expenditure which such legislation may require, for it is the conviction of the Board of Trustees that, in the past,

this situation has not only been a difficult problem for the Board to meet, but has also been the source of an intimation of unjustifiable prodigality of funds on the part of the Board of Trustees. The problem of maintaining a balanced budget, obviously necessary to the life and growth of our Society, becomes a vital one, the solution of which should be given serious thought by every delegate, in every legislative deliberation under consideration by the House of Delegates.

Approaching this situation in our administrative duties with the purpose of its successful regulation, nothing has been so helpful to us as the adoption of the monthly budget system as suggested by and adapted to our special needs by Dr. Harkness. By this plan it is possible to allocate expenditures to the specific activity and to determine, from month to month, for what purposes the money is being expended and whether or not any particular department is spending beyond reasonable bounds.

To further our determined efforts to keep within the estimated budget, the Board of Trustees has changed the fiscal year to the calendar year. This has proved decidedly advantageous. Inasmuch as the State Society dues are all paid before the annual session, it obviates the overlapping of the income and the expenditures for the year's activities and enables the Trustees or any special committee to more accurately regulate the expenses, as well as to co-ordinate the various operations under one responsible head.

The present unreliability of the economic situation renders accurate estimation of the probability of fully meeting the cost of future needs or unanticipated exigencies next to impossible. Had we been able to foresee the continued financial embarrassment which has so seriously affected the income of every member of our Society, some saving might have been made in the administrative offices by a reduction of the salaries. However, inasmuch as these contracts were made in good faith and in anticipation of better conditions, the Trustees felt morally obligated to fulfill them for the one year period for which they were made.

The larger percentage of increase in expenditures has been due to new activities, such as special investigations, legislative matters, medico-legal litigation, etc., rather than to salaries in the administrative department. Another factor influencing the resources of the Society has been a reduction in the number of members, due to the financial inactivity now existing. It must be apparent to any member of our Society who has studied the auditor's report, that if we are to maintain our present program of activities, the present dues must be continued.

Therefore, the question that is put squarely before us to determine, is whether or not we are going to progress as a strong scientific body and keep pace with other forward-looking societies in organized medicine. If these are the real purposes, the impelling motives of our Society, two things are absolutely essential for their successful realization; first, adequate financial support; second, an efficient adminis-

trative organization under one authoritative and responsible head.

Assuming that the Society had these aims and objects in mind when, by a record vote, the House of Delegates made it mandatory on the Board of Trustees, not only to employ a Managing Director, but also to supervise the financing of various departmental activities, we have to the best of our ability undertaken the task under the most unfavorable financial conditions.

The gainful results of the departmental activities affecting the professional welfare of every member of the Society have been reflected in an emphatic manner in a superior JOURNAL, improved laws in the medical practice act, prosecution of irregular practitioners, University extension courses and postgraduate clinics directed by the Speakers' Bureau, exhaustive investigation and invaluable report of the Committee on Medical Education and Hospitals, recommendations of the Medical Economics Committee and of many others whose efforts were just as worthy and whose results were just as beneficial. It would be unreasonable to assume that such benefits could be made possible without energetic committees, sacrifice of much time and effort, considerable expenditure of money and the coordination and direction of the Managing Director. Without intimate knowledge of his manifold duties, it is difficult to form an adequate conception of the diversity of interests growing out of the work of the various departments which appeal to the Managing Director for information and direction. Approximately one-fourth of his time is devoted to some phase of legislative work required by the Committee on Public Policy and Legislation.

Aside from valuable service rendered during legislative sessions, the Managing Director also keeps the county societies informed on the attitude, the activities and the voting on important medical questions by the respective representatives. He is also the liaison officer between the members of the Society and the attorney-general, as well as the law enforcement division of the Department of Health, which has done such effective work against quackery and irregular practice. As executive secretary to the Council, he must, in addition to keeping the minutes, acquire contacts through the Public Relations Committee with lay organizations such as the Federation of Women's Clubs, the Parent-Teacher Association, the social workers, etc., so that no program touching medical subjects and relations shall be given without the endorsement of the local medical society. He is the executive secretary of the Speakers Bureau Committee which has won such favorable recognition throughout the state, both lay and medical, as a result of special postgraduate clinics, radio talks, and public addresses by recognized authorities on medical subjects in the interest of progressive medicine. He renders valuable service to the Nurses Training Committee by means of letters, questionnaires and tabulations. His service to the Committee on Medical Education and Hospitals has been regarded by the members of that committee as invaluable.

With the Medical Economics Committee, his chief duties have been in securing a satisfactory form of contract for the county societies in their dealings with the boards of supervisors regarding care of the pauper sick. Twenty of these contracts are in force, netting a total sum of over \$60,000.

The Managing Director is also business manager, assistant editor of the JOURNAL and secretary to the various state society officers. As business manager, he is responsible for all records, filing and card-index systems, bookkeeping and the monthly budget sheet. Under general service, by his direction, the State Society offices become a clearing-house for information and advice, serving the county societies and their members. Questions by individual members as to what department to approach for help are answered either by citation to some official action by a certain committee or by reference to an officer of that committee for further direction. Aside from these, many miscellaneous questions affecting the board of health, the attorney-general's office, the board of assessment and review, regarding hospital equipment, library, etc., in their relation to taxation, are a few of the many subjects which call for the individual consideration of the Managing Director.

To an unprejudiced mind, having at heart only the interests of the Society, it is scarcely debatable that the value of an individual who can qualify for this diversified service, should not be underestimated. His duties demand ability, training, tact, energy, adaptability, and zeal for this special work. He should be acquainted with the needs of organized medicine, have influential political and lay contacts, and show ability to present our needs to legislators in an effective and authoritative manner.

We, as a Board, do not presume to suggest arbitrarily, future policies of the Society, for that is plainly the prerogative of the House of Delegates. Nevertheless, we are committed to the successful execution of its policies, and it therefore becomes a matter of deep concern to us to have each and every department of activity working effectively and harmoniously under one responsible head. In fact, according to Chapter VI, Section 5, of the by-laws, it becomes our expressed duty to employ and determine the salary of a Managing Director. Furthermore, it is our judgment that the present Managing Director has most satisfactorily measured up to the requirements of his office and that he is a valuable man to our Society and worthy of his hire. When the manifold interests of the Society, under his efficient supervision, are subjected to a critical analysis, we feel that the present plan of administration will prove to be the most economical and effective.

With a realization of the fact that it is within our delegated authority to appoint the Managing Director and determine his salary, we would not be imperious in these matters, if it is the expressed wish of the House of Delegates that, in the interest of economy and efficiency, his salary be reduced or that he be removed.

Mindful of the present unreliability of the economic future, it is conceivable that, however desirous

the State Society may be to continue the present activities and even the extension of greater ones, it may not be possible to realize them without financial loss. In such an event it is absolutely necessary that some constructive plans be proposed to meet the situation. Shall our activities, wholly or in part, be curtailed or abolished and considered not worth the cost? If only in part, which ones shall be curtailed? Shall the Trustees reduce salaries and not allow traveling and other expenses of special committees? Shall the Board of Trustees draw on our reserve fund to make up any existing deficit? Shall the office of Managing Director be abolished? If so, under what form of management shall the administrative affairs be conducted? By clerical help alone? By the Secretary, with added compensation, or by the Secretary and Editor jointly, aided by clerical help?

These are a few of the questions that the financial situation may arouse for discussion in the House of Delegates.

We, as Trustees, are hopeful that the exigency may never arise that will disturb the present business-like organization, so effectively coordinated with the various departmental interests, nor the personnel of its employees, and that in the deliberations of the House of Delegates, due regard be given the by-laws which declare that "all resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective."

It is our conviction that the affairs of the State Society, with its manifold ramifications into legislative, scientific, medico-legal, health, social and lay matters cannot be effectively and economically conducted without a Managing Director. With no thought of being imperative, we feel that our position in these matters, while firm, is justifiable, and we propose to stand by our convictions until otherwise ordered by the House of Delegates.

A detailed discussion from a statistical standpoint obviously need not enter into this report, inasmuch as a complete itemized statement of our cash account, our income and investment account and the expenditures for the year ending December 31, 1931, over the signature of W. Widdup & Co., certified accountants, is printed in full in the handbook of the House of Delegates. Briefly, our excess of expenditure over income was \$4,154.17, which clearly justifies the plea made by the Trustees last year for a raise of dues to \$12.00, which was granted for one year by the House of Delegates.

The monthly budget plan has been in operation only since January 1, 1932, and yet we are confident that because of the close scrutiny which is now possible in every department, emergency demands on our funds can be anticipated and provided for and excessive or unwarranted expenditures by any one department avoided. In our judgment, with the present efficient management, working under the monthly budget system, our State Society is as economically conducted as is possible, considering the

scope and effectiveness of the departmental activities authorized by the House of Delegates.

As members of the Board, we are in harmonious agreement in these vital questions. We recommend the continuation of the present activities of the Society and look with favor upon an extension of even greater ones, commensurate with financial security. We recognize in our improved JOURNAL a medical publication of high standing and favorable comment and endorse the maintenance of its present standard of excellence. We recommend an efficient, alert, comprehensive legislative program, and the coordination of all departmental activities under one authoritative head, preferably a lay Managing Director.

The energy which has been expended and the results which have been obtained fortify our belief that of vastly greater value to the State Society than accumulating a large surplus, is the continuation of the progressive measures for which organized medicine stands.

Measured by the cold, calculating standard of statistics, the deficit may, to some, be somewhat disappointing, but when we appraise the results obtained in terms of service rendered, of dignity maintained, of strength augmented, of ambitions realized, of protection afforded, of standards raised, of opportunities granted, of stability assured, of legislation enacted, of empiricism defeated, of ambitions aroused, of cooperation given and friendliness unfolded, the monetary loss becomes insignificant, and the creation of a reserve fund beyond reasonable limits of security by retrenchment of the State Society's present activities, is obviously without justification.

With abiding confidence that these questions of such vital importance to the growth and influence of our State Society will be considered by the House of Delegates in a liberal spirit; that all criticism will be constructive and that every transaction will be none other than for the ultimate improvement and protection of each member of our Society, we respectfully submit our annual report.

THE TRUSTEES

Oliver J. Fay, Chairman,
Gordon F. Harkness,
Edward M. Myers.

Dr. E. M. Myers, member of the Board of Trustees, made the following supplementary report:

Mr. President and Members of the House of Delegates:

In presenting our annual report, as printed in the handbook, I should like to emphasize some of our transactions and recommendations, as well as some of our problems, and say a few words in extenuation. Perhaps I should not say *extenuation* for that implies an excuse or palliation of a censurable fault and we do not feel that we are guilty of a fault, especially not a fault of the heart.

We have no apologies to make, for we have met the situation just as it was presented, viz., an ambitious, comprehensive program of departmental activities, involving the expenditure of considerable sums of money, authorized by the House of Delegates, to be

accomplished under the most unfavorable financial conditions.

Doubtless, we are all painfully aware that these are most unfavorable days in which to conduct successfully any enterprise, whether it be professional or commercial. The tension of the times and months of hard going are beginning to tell on our nerves and we seem to detect certain harshness and irritation in business contacts. This is natural enough, for we are all aware of the present unreliability of the economic picture, in spite of our whistling to keep up our courage. In fact, we are all on the edge of irascibility.

Incidentally, delegates, is this thought worth pondering? If we have lost faith in the immediate economic future, need we lose faith in each other? Need we adopt the principle of everybody for himself and the devil take the hindmost? Isn't it more business-like and more professional to give more consideration rather than less to the other fellow and his anxieties, which ultimately may become ours? If we can do nothing else for each other in these perilous days, we can do that much. We are all in a jam together, and if we are wise, we will cultivate fellow feeling. If we have to suffer, let us suffer like human beings. Even if we have to sink, it will be something to sink like gentlemen! But we shan't sink—there isn't the slightest prospect of such a drastic outcome.

After all our definitions have been given, optimism simply means faith. If we have faith in ourselves, in our associates, in our work, in our Society, we cannot be other than optimistic, and we will go on living together eventually with the world once more on an even keel, leaving behind only a shuddery memory of these trying days. It is in this spirit of optimism, cooperation and friendliness that we present a report of our transactions and offer our recommendations.

May I at this point stress this thought, that the Board of Trustees is not a creative body but an executive body. For this reason, it has been an extremely difficult task to reconcile the enthusiastic endorsement of measures by the House of Delegates, oftentimes given, I fear, without due regard to expenditures involved, with the available funds at our command, and at the same time maintain a balance between the receipts and disbursements, so necessary to a successful organization.

In the fiscal year from May 1, 1930, to May 1, 1931, this was not possible to do and this fact justified our appeal for an increase of the dues to \$12.00, which was granted at the last session of the House of Delegates. While we feel that this variance in income and expenditures was, in a large measure, responsible for the criticism directed toward the management of the affairs of the State Society, some was due to the spirit of censure which the widespread depression has created and some came through misinformation or lack of information. The latter, of course, is a regrettable state of affairs and should not exist, for it implies a lack of interest and a reaction aroused by prejudice or ignorance of true

facts, and not mature judgment based on correct information. The published statements that a full report of the financial status of our Society was not given; that we were headed toward bankruptcy and disruption of the Society; that the depletion of our funds was due to a high-salaried managing director and unwarranted expenditures by the Board of Trustees; that the authorized new activities were extravagant and not worth the cost, have been satisfactorily answered by the various state officers at the district meetings and by reassuring resolutions of confidence and commendation passed by the county societies.

The only disquieting thing to me is, how any member of our State Society could possibly arrive at such conclusions if he were a consistent and thoughtful reader of our JOURNAL and its articles relating to these activities.

It has also been said that the present Board of Trustees is a one-man Board. Now this, undoubtedly, refers to our venerable Chairman, who is the oldest in point of service, and being the oldest is perhaps the most vulnerable.

If this implication means ability, broad knowledge of the needs of the Society, or executive force, I will agree; but if it means sincerity of purpose, zeal for the welfare of the Society, the safeguarding of its interests or the promotion of its activities, I contend that it is not a one-man Board, with all due deference to him, and I'm glad he is here to hear me say it. Dr. Fay, with all his zeal for the well-being of the Society, could not show greater interest or make greater sacrifice of time or effort than Dr. Harkness and I are making in our official duties.

Delegates, there has never been a measure proposed, a decision made, a contract considered nor an expenditure authorized, without the full and free discussion by every member of the Board, usually in the hearing of the President, President-elect, Chairmen of the various Committees, and other officers of the State Society.

While I have been just two years in your service as Trustee, I have learned much. I have been amazed, repeatedly so, at the magnitude and diversity of interests that are every day transacted in the offices of our State Society. If every member of our Society, particularly the disquieted ones, would only occasionally visit our offices, examine the records, ask a few pertinent questions and become informed, I'm sure they would have a very different idea of the worth, extent and cost of conducting the State Society's activities.

I do not propose to discuss the finances of the Society from a statistical viewpoint for that can be done more ably by either Mr. Blank, the Secretary, or the statistician of our Board, Dr. Harkness; besides, a detailed report of the certified accountants has been printed in the handbook.

However, I think it is only fair to us as Trustees for me to say that every dollar which has been expended has been for legislative matters, medico-legal

affairs, special committee investigations, litigations and prosecutions, promotion of new activities, current and fixed expenses of administration; that the excess of expenditures over receipts has not been due to the salary of the managing director but to these activities just enumerated, all authorized by the House of Delegates, which became mandatory upon us to execute. I'm bound to say, furthermore, that Mr. Blank was employed as managing director and his salary fixed before the present Board was elected and yet we, as do other officers of the Society, feel that he is, by ability and training, a valuable man; efficient, energetic, well versed in the needs of the Society, with valuable lay and political contacts, and well worth his hire. We are firmly convinced, too, that the affairs of the Society cannot be conducted efficiently without the services of a managing director, preferably a layman, most certainly not by clerical help alone.

Personally, and I believe I have the support of the other two members of the Board, I am opposed to the appointment of a physician as managing director. By no process of reasoning can I bring myself to see how any successful practitioner, and we would want none other, who might qualify for this particular and important kind of work, could by any method of persuasion be induced to give up his practice for the sum of \$6,000 or less, as has been proposed.

In our opinion, the Society, with the present efficient management, working under the monthly budget system, devised and adapted to our special needs by Dr. Harkness, is as efficiently and economically conducted as possible, considering the many new activities which have been projected and authorized by the House of Delegates.

I do not mind telling you, too, that we, as a Board, propose to stand by our convictions in these matters until otherwise ordered by the House of Delegates. I hope I do not appear to speak imperiously, for I am not at heart. I'm fully aware of the fact that if we were to become dictatorial, it would be the wreck of our influence, the prostitution of our endowment as a Board and we would cease to be of value to the Society. I'm simply defending our position in these matters against what we feel is an unwarranted criticism on the part of the misinformed few.

Delegates, the real and the vital question for us to determine, is whether or not we are going to progress as a scientific body, keep pace with other live, forward-looking Societies in organized medicine, continue with our present activities, maintain a united front against the medical mountebank, the quacks and cults, and false standards of qualification and be a strong organization for our mutual protection against these insidious destructive influences in the future. These are things we must gravely consider.

If we are not interested, then, and feel that we are not getting a just return for our money, that the new activities are extravagant and not worth the

cost; if we want to be simply a scientific body divested of its progressive powers, merely an academic force, then let us vote to discontinue the activities and costs, but in so doing, let us be very sure we have something better to propose.

However, if we regard these things as vital to our very life and growth; if we want to be a progressive Society, embodying and utilizing the agencies for which organized medicine stands, then let us by all means vote for their continuance, and better still, for the development of even greater things.

With no thought whatever of minimizing the financial dilemma in which we, even nationwide, find ourselves, I contend that we as a Society cannot at this time afford to retrench but we can well afford to further our activities by the continuance of the present dues.

Delegates, I think I plead with a sympathetic understanding of what these things mean in personal sacrifice to every one of us. I once had the ambition to be a white-collared farmer, but I've had the rollers put under me and I'm still struggling to overcome the effects of that awful ride. But out of my financial tangle, I have evolved this philosophy of living; aside from the sacrifice I am now making to maintain my home, support my family and educate my boys, I owe it to myself and the worth and dignity of my profession to make the added sacrifice, to support those instrumentalities which reflect the liberal principles of progressive medicine.

Delegates, when I attend the annual sessions of our State Society and hear distinguished clinicians present medical and surgical cases and then listen to well prepared papers on scientific subjects, given by representative men from throughout the State, followed by earnest, practical discussions, I count myself fortunate in the opportunity afforded me, for I have learned much and am benefited; and then when I sit in the business-like sessions of the House of Delegates, all conducted with the single purpose of the advancement of the Society's interests and the ultimate improvement and protection of its members, I cannot believe there is one of us here today who will want to go back to the "good old days" of our Society, however valuable, for that is the cry of the self-satisfied man. If we ever need a united aggressive front in our Society, we need it now, in these perilous days. We cannot progress without financial provision for progressive measures. In our Society, as in any line of human endeavor, we get out of it just what we put into it, whether it be time or effort or money.

May I ask you delegates, in the coming deliberations of this body, that you give these questions your earnest thought and mature judgment; consider these recommendations with an open, unbiased mind, view them with prophetic vision and then vote your convictions, and I will have no fear for the future of our great Society.

Mr. President, I move the adoption of our report.

The motion was seconded and carried.

REPORT OF THE MANAGING DIRECTOR

House of Delegates, Iowa State Medical Society:

Since it is the duty of the Managing Director to act as assistant to each officer and executive secretary to each committee of the State Society, his activities are detailed more or less completely in the various reports of the standing and special committees and the officers of the society.

One proposal which is not specifically within the jurisdiction of any one officer or committee, but which has received quite general approval or consent, may be here presented briefly. The proposal for group insurance having been duly considered by the Trustees and Medico-legal Committee, in accordance with the action of the House of Delegates in 1931, and being reported upon unfavorably, there has been proposed a new plan which seems to incorporate advantages hoped for from group insurance and to eliminate any possible disadvantages. Briefly, this plan is to

allow some officer of the State Society, possibly the Managing Director, the privilege of acting as agent for one or more companies writing malpractice protection. Members desiring to purchase insurance in such company or companies could do so through the appointed officer, who, as agent, would receive all commissions. The State Society will receive the benefit.

Such a plan would avoid all possible objections to group insurance, would permit the purchase of individual policies of whatever size and type desired, and in a simple and business-like procedure would offer the members of the Iowa State Medical Society a means of reducing overhead costs of the organization without increasing their personal expenditure.

Respectfully submitted,

Vernon D. Blank, Managing Director.

The managing director, Mr. Blank, was not present to give his report in the regular order of business.

Reports of Standing Committees

REPORT OF THE MEDICO-LEGAL COMMITTEE

The Medico-Legal Committee of the Iowa State Medical Society wishes to report that the past year has been devoid of any unusual legal situations with which we have been obliged to cope.

Since it has become quite generally known by our members that those holding malpractice policies with commercial companies are not defended by the society, the committee has not been informed regarding a number of malpractice complications which have arisen. This negligence in affording this information is, we believe, a bad thing because we are often consulted by defending companies as to the advisability of settling claims out of court, and if we are not furnished the data from which to form conclusions, we are handicapped in giving advice. Your committee has no desire to assume a paternalistic attitude, but in the furtherance of the medico-legal interests of our members, we feel that it is best that our committee be furnished a copy of the details concerning actual or threatened suits.

It has been claimed that the commercial insurance companies with whom our members are insured are inclined to settle malpractice suits out of court without consent of defendants and our society. We have not found this to be true, at least as far as consulting defendants is concerned, and we have found these companies willing and cooperative in consulting our committee before making this type of settlement.

During the year, the Medico-Legal Committee has conferred with the Board of Trustees concerning the advisability of taking blanket malpractice insurance for such of our members as desire policies issued to them in this way and as far as we know, no definite decision has as yet been made. Our committee has been anxious to conserve the best interests of society members and for the information of all, the following synopsis of the situation is here offered:

(1) About sixty-five per cent of our members purchase commercial malpractice protection.

(2) Of the three companies who sell most of this insurance, the Medical Protective Company, of Chicago, holds first place, the United States Fidelity and Guaranty second, and the Aetna third.

(3) The U. S. F. & G. has made overtures to our society, promising a five or six dollar reduction in their premiums as compared with other companies, if we will purchase from them a master policy, under the conditions of which a given number of our members will purchase their policies.

(4) Under the U. S. F. & G. master policy, each member will pay premiums direct to the company.

(5) The above mentioned contract is virtually a promise of a small reduction of the individual premiums in return for the endorsement of the company by our Society.

(6) As far as our committee has been able to determine, no real advantage will be gained in purchasing so-called blanket insurance aside from a slight reduction in premium costs.

(7) Judging, alone, by our correspondence with the state medical societies which have purchased blanket malpractice insurance, there has been no prejudicial effect as far as court procedures have been concerned, but very few of our correspondents have carried this type of insurance for any great length of time.

(8) The Medico-Legal Committee has attempted to approach the situation from a judicial point of view, and its recommendation may be laid down as follows: We believe it best to disregard the slight reduction in malpractice policy premiums for the following reasons:

(a) In order to prevent growing prejudice against the medical profession as a group, it would seem best to avoid appearance of paternalism and mass resistance against the public.

- (b) Knowledge that a physician is commercially indemnified tempts disgruntled patients to bring suits for malpractice, whereas a physician who quietly and personally purchases his own protection, may not be known to be indemnified.
- (c) The more paternalistic our organization becomes, the greater the ultimate expense of management.
- (d) The purchaser of an indemnity policy, if not satisfied with his protection, can purchase the same from any company which suits his fancy without feeling obliged to support the company issuing a blanket policy to the Society.
- (e) Iowa physicians have been very fortunate in the past in malpractice affairs and it has always been a good practice to let well enough alone when all is well. The chief anxiety of the Medico-Legal Committee rests in the fact that we believe it to be ill-advised for the sake of a few dollars saving per member, to let it be known that we are massing our forces in a defensive campaign against the public.

Certain persons have raised the question as to whether it is proper for our members to pay a fee to the society for medical defense when the organization does not defend them in the event that they are protected by commercial insurance. In answer to this we wish to say that members do not at the present time pay a specific fee for medical defense, because this expense is carried by the regular dues. It must be remembered that medico-legal expense is not all incurred in defending members against malpractice. During the past year our legal counsel has been paid for looking after the interests of the society in the Norman Baker slander suit which is pending against our society. It is advisable that we have sufficient funds to protect the legal interests of the society as a whole, and it must be held in mind that the organization stands ready at any time to defend any member against malpractice who has no commercial insurance.

F. A. Ely, Chairman.

This report was concurred in by the Board of Trustees in session Wednesday, March 16, 1932.

Oliver J. Fay, Chairman of Board.
G. F. Harkness.
E. W. Myers.

In the absence of Dr. Ely, chairman of the committee, Dr. Bellinger presented as a supplementary report the annual report of malpractice cases for the year ending April 25, 1932.

ANNUAL REPORT OF MALPRACTICE CASES FOR THE YEAR ENDING APRIL 25, 1932

To the Iowa State Medical Society:

We are submitting herewith our annual report of malpractice cases for the year ending April 25, 1932. The report includes all cases brought against the members of the Society, whether they have indemnity or not, so far as the same have been reported to us, with the exception of one case in Polk County which has been recently begun against Dr.

Pearson and which case is being defended by the United States Fidelity and Guaranty Company.

During the year seventeen new cases have been begun, twelve cases have been disposed of, and twenty-nine cases are still pending. Of the twenty-nine cases now pending, fourteen of them have no indemnity and are being defended at the expense of the Society. Of these fourteen cases, four have been begun during the last year and three of them were pending at the date of the arrangement between the Medical Protective Company and the State Medical Society, whereby one-half of the expense of the defense was to be paid by the State Medical Society and one-half by the Medical Protective Company. The total aggregate amount claimed in petitions filed in malpractice cases during the last year is \$180,435.00.

Since the organization of the Medical Defense Committee of the State Medical Society 347 cases have been commenced against members of the Society, of which 29 are still pending.

The total amount claimed in damages to date in all these malpractice cases is \$4,403,440.85.

Judgments have been obtained against members, aggregating \$63,494.35.

We desire to acknowledge the helpfulness of the Medical Defense Committee and to suggest that, in our judgment, malpractice cases should not be tried during these difficult times if trial can be avoided.

Respectfully submitted,

April 25, 1932.

Charles M. Dutcher.

Dr. Bellinger moved that the report as printed in the handbook, and the supplementary report, be accepted. The motion was seconded and carried.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

The past society year being the one in which the legislature does not convene, your Committee on Public Policy and Legislation has been concerned with preparations for the Forty-fifth General Assembly, which will convene during the ensuing year, and this report is therefore devoted to four principal topics: proposed modifications in the Perkins, Haskell-Klaus law, medical practice in Iowa, law enforcement activities, and political considerations. Since it is important that the House of Delegates should consider and act upon these matters so that the Committee on Public Policy and Legislation may have definite advice and instructions, these topics are set forth below:

Proposed Modifications in the Perkins, Haskell-Klaus Law. In accordance with the directions of the House of Delegates in session May, 1931, this committee collected from members of the society, the state board of education, the University medical college and hospital authorities, and the proper state and county officers, suggestions and proposals for the amendment of the Perkins, Haskell-Klaus law. These various proposals were analyzed and classified into three principal propositions, which in accordance with the instructions of the House of Delegates, were

then published in the JOURNAL (January, 1932, pages 41 and 42) and are given below. These proposals have been given serious and formal consideration in numerous district and county medical society meetings and many delegates have been definitely instructed with regard to them. In accordance with the provisions of the last House of Delegates, the House in session in 1932 should take formal action upon these proposed amendments to the Perkins, Haskell-Klaus law and should instruct your Committee on Public Policy and Legislation as to what the committee should attempt in the coming session of the legislature. The proposed changes submitted by the committee for consideration are:

I. Supervisors Should Find for Indigency. One of the suggestions most frequently made was that Section 4010 of the code, providing for "investigation and report by county attorney" and which specifies that he "shall make a thorough investigation of . . . the ability of the patient or others chargeable with his support to pay the expenses of such treatment and care," should be so amended that this function of investigating indigency should be transferred to the board of supervisors. Among the reasons given for such a change are the fact that the supervisors, being legally charged with responsibility for all indigents within the county, are in most cases naturally and necessarily in possession of the desired information; the further fact that in the case of persons whose status is not already known to the supervisors, that body is in the best position to secure the desired information; and finally, the important fact that the finding of indigency thus made by the board prior to commitment would be effective subsequently. This latter point is of such importance that many suggestions were made to the effect that the law should be modified to make aftercare at home a legal liability of the county whose board had previously recommended commitment. County officers, faculty members, health officers and physicians were almost unanimously in agreement on this proposition that some means should be found for coordinating the functions of determining indigency for commitment to the University Hospitals on one hand and for local county aid on the other, so that the same individual might not be indigent by one standard and self-supporting by the other. This disparity and lack of coordination has caused hardships to all concerned and it is the purpose of the amendments proposed for this section to eliminate these difficulties.

A few proposals were made to the effect that modification of the law should go even further and instead of giving the board of supervisors merely the function of investigating and the power to recommend, there should be vested in the board the actual authority to make a commitment. However, as will be seen later, this proposal would probably not be considered practicable unless the third main proposal (below) were written into the law so that the counties were paying a portion of the cost of hospitalization.

II. Two Physicians to Examine. Another suggestion which was very generally made, was that more than one physician should be required to make the "examination by a physician" and "report by a physician" provided for in Sections 4008 and 4009 of the code. The reasons for such a change are too obvious to need detailed discussion. The system in vogue in Wapello and Linn counties where a committee of the county medical society performs the function of "examining physician" was frequently mentioned as an ideal method and its successful operation cited as proof of the soundness of this proposal. While no members of the state medical society had the temerity to make such suggestions, yet others did advocate either a definite requirement that medical recommendations must be concurred in by two or more members of the county medical society, or even that the Wapello and Linn county plans should be incorporated in the law. There was, however, fairly unanimous opinion that in some way more than one physician should be required to make an examination.

III. Counties Should Share Hospitalization Costs. The proposal which will arouse widespread interest, was made almost unanimously; namely, that a part of the hospitalization costs should be charged to the county.

The exact percentage of cost, if any, which should be borne by the county is, of course, a matter for careful economic and political consideration, but the present tentative suggestion is that the state should properly pay 50 per cent of hospitalization costs and the county 50 per cent. Not only is such a plan an exact meeting halfway of the system now in operation and the recently proposed legislation, but it has several sound bases. It seems fair to assume that the two functions of the University Hospitals, caring for the indigent and supplying clinical teaching material, are equally important. If such be the case, then it is only fair that the state should bear one-half of the total expense as a legitimate and inevitable part of the costs of maintaining a first class medical college. It is equally fair that the counties receiving service should pay the remaining half of the total cost. It is estimated that this 50 per cent would amount to about \$2.25 per diem.

Another argument in favor of a division of the cost of hospitalization is the equalization of costs to the different counties. Under the present law the counties with a large population and adjacent to Iowa City are receiving much more service than they are

paying for, while the less populous counties located farther from the University are receiving much less service than they are paying for.

A further reason for the division of cost is the fact that there is at the present time a large waiting list of indigent patients, who have been legally committed by the counties (there were approximately 2,000 on this waiting list in June, 1930). The division of cost would reduce this waiting list materially as the hospital could be operated at capacity, instead of two-thirds capacity as at present.

Proposed Changes. The Committee on Public Policy and Legislation therefore proposes three major changes in the Perkins, Haskell-Klaus law:

1. Supervisors should find for indigency.
2. More than one physician should sign the commitment.
3. Division of cost between county and state on a basis of 50 per cent being paid by the state and 50 per cent by the county.

Medical Practice in Iowa

The amendments to the medical practice act, as secured in the Forty-fourth General Assembly and set forth by this committee in its last annual report, seem to be accomplishing the desired ends. Although law enforcement is necessarily a tedious procedure because of the large number of violators of the medical practice laws and because of uncertainty still existing as to the actual interpretation of the medical practice act, yet it is the feeling of the state officers entrusted with enforcement of the practice acts and of your Committee on Public Policy and Legislation that the laws of Iowa regulating the practice of the healing arts are sufficient to prevent the practice of medicine by the untrained, if the present laws can be fully enforced. That marked progress is being made toward this end is indicated in a portion of this report. If it is desired to consider any further improvement of the medical practice act, your committee would suggest that a statutory definition of major (or minor) surgery might be undertaken. If it is desired to consider a more radical revision of the laws governing the healing arts, your committee would suggest a consideration of the Illinois law which separates medical and drugless practice and provides only two boards, one for each type of practice. However, your committee would still maintain that the ideal is a single medical board, with all others eliminated.

Law Enforcement Activities

Since July 1, 1931, Mr. George N. Lyman has been assistant to Inspector Herman B. Carlson of the department of health and these two officers have been actively engaged in securing evidence of and prosecuting (under the cooperative direction of the attorney-general's office) numerous violators of the practice acts. As previously pointed out, most violations of the practice acts are in the field of medical practice, because it seems to be the most desirable field, and of approximately 200 persons who have been stopped from illegal practice in the past two and one-half years, nearly two-thirds were violating the medical practice act. About one-third of these cases have come to action in the courts. Of these court cases forty-one were concerned with violation of the medical practice act.

It should be recognized that there are so many violations of the medical practice act at present that the limited personnel in the law enforcement division of the department of health and the attorney-general's office is unable to handle every case or even every complaint as promptly as is desirable. The necessary

procedure therefore is to select certain typical cases as test cases and to prosecute them as rapidly as possible to final decision, preferably in the Supreme Court. The cases against Osteopaths Baker, Groves and McPheeters fall in this classification, since they are cases brought to determine whether or not the laws of Iowa permit any but doctors of medicine to employ injection treatment.

This committee would point out that it is a public duty of every ethical physician to report cases of law violation which come to his attention, as a part of his duty as a citizen and his responsibility to the public to maintain proper standards of medical practice. At the same time the committee would counsel patience in connection with these cases, because of the aforementioned large number of violations and the necessary time required to establish new principles and secure court decisions. The committee is highly satisfied with the impartial and energetic activities of the law enforcement division of the department of health and with the firm, fair and aggressive policy of law enforcement which is being followed by the attorney-general's office. It should be noted that each case brought by the attorney-general's office has thus far resulted in an ultimate victory for the state, which is in part due to the policy of the attorney-general in assigning one member of his staff exclusively to such cases, which policy your committee would commend.

Political Considerations

As evidenced by the record of measures passed, as well as those defeated in the Forty-fourth General Assembly, a considerable majority of both houses were sound and constructive in their attitude on health and medical legislation. This enlightened responsiveness to the best health interests of our state is the result of two things: a continuously aggressive policy on the part of your committee in supplying the proper information to both legislators and their constituents, and an ever-increasing interest and activity in local political affairs by the members of the profession.

As indicated above, the Committee on Public Policy and Legislation by its members, or through the managing director, endeavors to keep the members of the legislature informed of the attitude of the profession upon the various health and medical matters which come up and to supply any and all information, facts and figures asked for in connection with such legislation. On the other hand, the committee also reports to the county medical societies the voting record and (in so far as known) the attitude of both senators and representatives, on health and medical matters. Such reports are made either upon the request of the physicians or of the legislators. They are made in a spirit of political fair-play and without recommendation, the various county societies and the individual members thereof being left to draw their own conclusions and determine their course of action.

While the more spectacular results in legislative work are to be found in final votes on specific meas-

ures, yet the real work of education and information is accomplished in the local electorates and in most cases prior to the primaries or the election. An ever-increasing number of county societies and members have been using the voting reports supplied by the legislative committee as a basis for conferences with their representatives or senators and in some cases as a platform for direct political action in supporting or opposing a given candidate.

By cooperation of this sort the medical profession was instrumental in several instances in both the last primaries and the last election, in assisting materially to elect legislators of the best type. In this connection it should be noted that in no instance has the medical profession sympathized with or supported any candidate solely because of his attitude on health and medical matters. On the contrary, it is obvious that any man who is safe and sane in his attitude on health problems is equally reliable in other affairs.

In conclusion, your committee requests specific directions from the House of Delegates as to procedure in connection with the Perkins, Haskell-Klaus law, and welcomes any suggestion or direction from the House with regard to medical practice and would urge continued interest and activity in civic and political affairs. Respectfully submitted,

Thomas A. Burcham, Chairman.

Dr. T. A. Burcham, chairman of the Committee on Public Policy and Legislation, moved that the report as printed in the handbook be accepted. The motion was seconded and carried.

Dr. Burcham made a supplementary report on the poll of the House of Delegates on the Perkins, Haskell-Klaus law modifications, as follows:

POLL OF HOUSE OF DELEGATES IN PERKINS, HASKELL-KLAUS LAW MODIFICATIONS

In January of 1932 President Channing G. Smith sent to each of the 118 members of the House of Delegates a letter stating that due to current conditions he questioned the propriety of calling a special meeting of the House of Delegates to consider modifications of the Perkins, Haskell-Klaus law and asked for a vote by mail as to whether or not such a meeting should be called. Seventy-six replies were received. Three did not vote upon this proposition; two voted in favor of the meeting, and seventy-one voted against the president calling a special session for this purpose.

At the same time the delegates were asked to express their opinion upon the three proposals which had been published by the Committee on Public Policy and Legislation in its report in the January JOURNAL. The first proposal was that the law should be amended to make the supervisors rather than the county attorney responsible for investigations as to indigency. The vote on this proposition was fifty-five affirmative, four negative and seven not voting. The second proposal was that two or more physicians should be required to concur in the examination and recommendation. The vote on this proposition was forty-three affirmative, sixteen nega-

tive and seventeen not voting. The third proposal was that the costs of hospitalization should be divided between the state and the various counties on approximately a 50-50 basis. The vote on this proposition was 55 affirmative, two negative and nineteen not voting.

In view of the fact that each of the three proposals received a substantial majority of the votes cast, your committee presents herewith for action by the House of Delegates, three resolutions embodying the three proposals:

BE IT RESOLVED, That the House of Delegates of the Iowa State Medical Society recommend to the Committee on Public Policy and Legislation that an effort be made in the coming session of the legislature to amend Section 4010 of the code so that the county board of supervisors instead of the county attorney shall make the investigation to determine the indigency of persons proposed for commitment under the Perkins, Haskell-Klaus law.

BE IT RESOLVED, That the House of Delegates of the Iowa State Medical Society recommend to the Committee on Public Policy and Legislation that an effort be made in the coming session of the legislature to amend Sections 4008 and 4009 of the code so that the examination and report which the present law requires to be made by a physician shall be made by two or more physicians.

BE IT RESOLVED, That the House of Delegates of the Iowa State Medical Society recommend to the Committee on Public Policy and Legislation that an effort be made in the coming session of the legislature to amend the so-called Perkins, Haskell-Klaus law in such a way that the costs of hospitalization of indigent patients at the University Hospitals shall be borne in part by the state and in part by the county from which such patients are committed.

In the view of this committee, the medical practice act as amended in the Forty-fourth General Assembly, is sufficiently definite to permit of reasonable law enforcement. Certain minor changes or improvements in the present law may be later on desirable as the result of the experience of the law enforcement division of the attorney-general's office in enforcing the medical practice act. These specific details cannot be anticipated at this time. Neither can we anticipate the various forms which further efforts of the cults may take to enlarge their field of practice by legal enactment. For these and other reasons which will occur to the members of the House, your committee would suggest the adoption of the following or some similar resolution:

RESOLVED, That the House of Delegates instruct the Committee on Public Policy and Legislation to use every proper effort to maintain the practice acts and law enforcement substantially as at present and that the committee be authorized to use its best judgment in furthering legislation to improve the present medical practice acts along practically the same procedure as in the last legislature.

Dr. Burcham moved that the supplementary re-

port, including the resolutions, be received. The motion was seconded and carried.

Dr. E. B. Williams asked why the district judge should have anything to do with the commitment of patients.

Dr. Burcham explained that under the present set-up the judge commits the patient to the hospital; the committee did not feel that the statute should be changed more than necessary, and according to legal advice a patient must be committed through the district court; further, that the principal purpose of the proposed legislation was to make the county responsible for the care of the indigent patient after his return from the hospital.

In connection with a discussion as to the qualifications of a board of supervisors for passing on the indigency of patients, and the difficulty in getting such a board together, Dr. E. B. Bush described the arrangement in several counties in his district in which a full-time nurse, part of whose salary is paid by the board of supervisors, passes on all indigent cases.

Upon the request of the President, Dr. Burcham read the first of the four resolutions contained in the supplementary report of his committee. Dr. Burcham moved that this resolution be adopted. The motion was seconded and carried.

Dr. Burcham moved the adoption of the second resolution. The motion was seconded and carried.

Dr. Burcham moved the adoption of the third resolution. The motion was seconded.

There followed a discussion as to the most efficient and economical method of caring for indigent patients and the problem of securing the proper clinical teaching material for the University Hospitals.

Dr. Williams moved an amendment to the original motion, that the state pay the examiner's fee and traveling expenses and the county pay the hospital expenses. The motion was seconded. Following a discussion of this proposal, Dr. Bush asked if the amendment had the approval of the chairman of the committee. Dr. Burcham replied that it did not. Upon vote, the amendment was lost.

Upon vote, the original motion carried.

Dr. Burcham moved the adoption of the fourth resolution. The motion was seconded and carried.

Dr. W. N. Moore read a report describing activities in his community directed toward the support of ethical medical practice.

Dr. Burcham reported that since the publication of the handbook he had had several visits from a Des Moines attorney, Mr. Howard F. Boeke, who is attempting to have the Iowa law changed so that a debtor's wages might be garnisheed up to ten per cent. Dr. Burcham stated that investigation seemed to indicate that the attorney was making an honest effort to get certain organizations to endorse this effort. He asked that the State Society support such a change in the law. Dr. Burcham moved that the House of Delegates agree to support such a movement. The motion was seconded and carried.

The President called for the report of the Library Committee.

REPORT OF THE MEDICAL LIBRARY COMMITTEE

House of Delegates, Iowa State Medical Society:

The following statistical summary of the activities and condition of the Iowa State Medical Library for the past twelve months has been submitted to the Medical Library Committee by Dr. Jeannette Dean-Throckmorton, Librarian:

Requests for literature.....	2,605	
Pieces of literature loaned.....	10,343	
Pieces of literature borrowed from other libraries	34	
Letters written	1,367	
Cards written	1,282	
Visitors in the Library.....	7,735	
Telephone calls coming in (long distance—5)	709	
Cards made for new acquisitions—		
Book file	3,326	
Journal file	206	
Reprint file	4,073	7,605
Periodicals regularly received—		
By subscription	145	
By gift	73	218
Volumes in the Library June 30, 1931....	14,523	
(Increase of 1,622 since July 1, 1930)		
Gifts to the Library—		
Books	877	
Reports	44	
Transactions	36	
Journals (bound)	394	
Journals (unbound)	10,732	
Reprints	1,310	
Pamphlets	142	
Pictures	2	
Museum exhibits (3 donors)		
Duplicates given to other libraries—		
Books		
Journals (bound)	37	
Journals (unbound)	1,403	
Transactions	26	
Reports	12	

Felix A. Hennessy, Chairman.

Dr. Hennessy asked Dr. Jeannette Dean-Throckmorton to report for the committee. Dr. Throckmorton told of her effort to collect objects of historical interest, to be placed in the Historical Building. She asked that the members of the Society send her copies of old fee bills, county society records, old college catalogues, book plates, and old journals, particularly old blue-covered Iowa journals. Dr. Throckmorton mentioned the names of physicians who had donated books, journals, copies of fee bills, etc., and told of her efforts to place copies of the Journal of the Iowa State Medical Society on the shelves of eastern libraries. She expressed her wil-

lingness to assist the physicians of Iowa in writing papers, in compiling bibliographies, and in securing literature not available in the Library.

Dr. Hennessy moved that a vote of thanks be accorded Dr. Throckmorton for her report, and that the report as printed in the handbook, together with Dr. Throckmorton's supplementary report, be accepted. The motion was seconded and carried.

The President asked for the report of the Councilor of the fifth district. Dr. W. W. Pearson, Councilor of that district, reported that his efforts had been directed toward imparting to the societies of the district the information which they should have in order that the delegates might come before the House prepared to intelligently discuss the proposals to be presented. Dr. Pearson requested that Dr. Robert Evans, of Fort Dodge, be made a life member of the State Society. Dr. Pearson moved that his report, as printed in the handbook, together with the request for life membership for Dr. Evans, be accepted. The motion was seconded and carried.

The President called for the report of the managing director. Mr. Blank expressed the wish that some member of the House move the adoption of his report, since it contained a proposal which held great possibilities for the future of organized medicine and which could solve the problem of what the dues should be.

Dr. Fay moved the adoption of the report of the managing director. The motion was seconded and carried.

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

House of Delegates, Iowa State Medical Society:

The Council of the Iowa State Medical Society having voted to sponsor certain changes in the constitution of the Society and having appointed a special committee to confer with this committee regarding such amendments, your Committee on Constitution and By-Laws therefore places before the House of Delegates for proper reading in the 1932 session and subsequent action in the House of Delegates of 1933, the following amendments:

BE IT RESOLVED, that a new article shall be added to the constitution, as follows:

ARTICLE VI

Council

The Council shall be the board of trustees of this Society, with full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into special session. It shall consist of the Councilors, the President, President-elect, Secretary and Treasurer of the Society. Seven members shall constitute a quorum.

BE IT FURTHER RESOLVED, that the title of the present Article VI shall be changed to Article VII.

BE IT FURTHER RESOLVED, that the title of

the present Article VII shall be changed to Article VIII.

BE IT FURTHER RESOLVED, that the title of the present Article VIII shall be changed to Article IX and that the words "and three Trustees" be stricken; that the word "and" be inserted preceding the word "eleven" and a period placed following the word "Councilors."

BE IT FURTHER RESOLVED, that the title of the present Article IX shall be changed to Article X; that the title of the present Article X shall be changed to Article XI; that the title of the present Article XI shall be changed to Article XII; and that the title of the present Article XII shall be changed to Article XIII.

In accordance with the following motion adopted by the 1931 House of Delegates: "That the recommendation of the Nominating Committee relative to making the Committee on Medical Education and Hospitals a standing committee, be reported to the Committee on Constitution and By-Laws for consideration at the next meeting of the House of Delegates," the committee submits the following amendments:

RESOLVED, that there shall be added to Chapter VIII, Section 1 of the by-laws, following the words "A committee on finance (3)" a paragraph reading as follows: "A committee on medical education and hospitals (3)."

BE IT FURTHER RESOLVED, that there shall be added to Chapter VIII, of the by-laws, a section to read as follows: "Sec. 11. The Committee on Medical Education and Hospitals shall consist of three members. Its function shall be to investigate conditions of medical education and hospitals and associated subjects and to suggest means and methods by which the same may be improved."

The final meeting of the Committee on Constitution and By-Laws has not as yet been held. A further report will therefore be made to the House of Delegates.

C. B. Taylor, Chairman.

Dr. C. B. Taylor, chairman of the committee, read the proposed Article VI, suggested by a committee of the Council, and explained its significance. Dr. Taylor moved that the proposed amendment to the constitution be received by the House of Delegates and laid over for action at the 1933 annual session. The motion was seconded and carried.

Dr. Boice read the following proposal, to be referred to the Committee on Constitution and By-Laws for action at the Friday morning meeting:

At the meeting of the Council, May 28, 1931, a resolution was adopted unanimously, authorizing the chairman of the Council to appoint a committee, with Dr. Jepson as chairman, the duty of which committee should be to recommend such changes in the constitution as would give the Council executive functions in the interval between annual sessions.

Developments in the past two or three years have been such that the State Society must function for

twelve months each year, and the constitution is not explicit as to the functions of either the Trustees or the Council. Therefore, this resolution was proposed and passed with the idea of giving the Council authority to proceed in the name of the House of Delegates throughout the year. Additional members of the committee are: Dr. A. V. Hennessy and Dr. C. A. Boice. This committee presents for the Council the following changes in the constitution:

The Council

Art. VI:

"The Council shall be the Board of Trustees of this Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into session as provided in the Constitution and By-Laws. It shall consist of the Councilors, the President, the President-elect, the Secretary and the Treasurer of the Association. Seven of its members shall constitute a quorum.

(Article VI shall be Article VII; Article VII shall be Article VIII; Article VIII shall be Article IX; Article IX shall be Article X; Article X shall be Article XI; Article XI shall be Article XII; Article XII shall be Article XIII.)

Article VIII, Section 1 of the Constitution, omit the final three words in the section and insert the word "and" following the word "treasurer."

Article VIII, Section 2 of the Constitution, omit the line, "the Trustees shall be elected for three years, one each year."

Article VIII, Section 3 of the Constitution, omit the words "and Trustee," in lines five and six.

Article VIII, Section 4 shall be omitted in its entirety.

On my own initiative I desire to present these further changes in the Constitution.

ARTICLE IV

Composition of the Association

In lieu of the present Section 1, insert the following as the new Section 1:

"This Association shall consist of members who shall be the members of the component county medical societies who have been certified to the headquarters of this Association, and whose dues and assessments for the current year have been received by the Secretary."

Section 2 shall be omitted in its entirety.

Section 4 shall be omitted in its entirety.

Section 5 shall be omitted in its entirety.

The new Section 2 shall be the following:

"Life Members. Life members shall consist of such members in good standing as shall have paid their annual dues, and other obligations to the society for thirty consecutive years, and shall have been so recommended by their county society. Such members shall receive the Journal, shall be exempted from the payment of dues; may not hold office nor be eligible to the advantages of medical defense."

The new Section 3 shall be the following:

"Guests. The Chairmen of the Sections on Surgery, Medicine and of the Head Specialties (eye, ear, nose and throat), shall each be authorized, with the concurrence of the Program Committee, to invite one guest speaker from outside the state. On special occasions the council may invite additional guests."

The old Section 3 shall be made the new Section 4:

"Associate Members. Teachers in any regular medical school, resident in Iowa, in no manner engaged in the practice of medicine, and not otherwise eligible to regular membership, may become associate members of this Society, when elected associate members of the component society of the county in which said teachers live. Such members shall be designated associate members; they shall enjoy the same privileges as regular members and shall be subject to the same conditions."

The Committee has also prepared comprehensive changes in the By-Laws which explicitly define the limitations and duties of the Council in respect to the House of Delegates.

These By-Laws will be presented at a later date.

The foregoing recommendations of the Committee have received the unanimous endorsement of the Council.

Respectfully submitted for the Council,

C. A. Boice, Secretary.

REPORT OF THE COMMITTEE ON NECROLOGY

Dr. Woodward, chairman of the Committee on Necrology, asked that Dr. Boice submit the report of the committee.

The President asked that the members of the House rise during the presentation of the report.

The passing year has taken heavy toll of our professional brethren and it is well that we pause in our activities for a moment and recall those who will meet with us no more. Of those who have gone from us since the last meeting of this Society, there were some upon whom we had learned to rely greatly, and they had not been found wanting. They have laid down the burden and others will carry it for a space. Two of these have been honored as our Presidents; others had been active in other roles; one, a member of the State Board of Health; another, a well beloved teacher in the University; others leaders in the professional life of their communities. A few had passed the ripe age of four score years; a half dozen were not permitted to go beyond the two score line. Some had never affiliated themselves with the State Society, nevertheless served their communities well; of each one, we may say truly, he fought in a good cause, he has finished the work given him to do, and we trust that the reward will be commensurate with the deserts. In memory of our brethren who have answered the last call, may we stand while the roll for them is called.

Bailey, Cassius W.....60	Pleasant Plain.....Oct. 10, 1931	Apoplexy.
Bassett, Lemual A.....64	BooneFeb. 7, 1931	Myocardial degeneration.
		Coronary sclerosis.
Beaver, Charles Vernon.....74	AnitaJune 26, 1931	Arteriosclerosis. Vascular hypertension.
Bellaire, Roy Frank.....47	Sioux City.....Aug. 11, 1931	Streptococcus Viridans—blood stream infection. Acute endocarditis.
Blaise, Theodore Thomas.....72	Mason City.....May 15, 1931	Arteriosclerosis.
Calbreath, Creed C.....64	CharitonMarch 26, 1932	Chronic nephritis.
Coakley, Orlo E.....50	CrestonMarch 3, 1932	
Coldren, Cassius Milo.....38	MilfordOct. 5, 1931	Barbital sodium poisoning.
Couper, Edward Alexander.....67	BrittJuly 27, 1931	General peritonitis.
Cowden, Alex M.....77	WashingtonApril 16, 1932	Age.
Crane, George Henry.....63	HolsteinMarch 31, 1931	
Crouse, Eugene A.....85	Grundy Center.....April 8, 1932	
Cummings, Louis F.....70	HopkintonMarch 20, 1932	Apoplexy.
Daly, William Thomas.....58	CrescoDec. 28, 1931	Acute dilatation of heart.
Dean, Willis W.....60	Sioux City.....Feb. 13, 1932	
DeLano, Albert H.....78	Lone Tree.....Feb. 5, 1932	
DeWitt, Charles Herman.....72	GlenwoodOct. 13, 1931	Cerebral embolus.
Dilts, John Joseph.....67	SalemMarch 2, 1931	Cerebral hemorrhage. Arteriosclerosis.
Doolittle, John Comber.....71	Des MoinesOct. 2, 1931	Acute pneumonia.
Doran, Lyle Williams.....32	Sioux City.....May 4, 1931	Acute rheumatic fever. Pulmonary embolism.
Druet, Arthur Lewis.....54	LarchwoodMay 28, 1931	
Edgerly, Edward Tyler.....67	OttumwaNov. 13, 1931	Operation for vesical calculus.
Elerick, John Wesley.....80	OttumwaAug. 13, 1931	Primary cancer of liver.
Fegers, Charles H.....58	KeokukJan. 19, 1931	Chronic myocarditis.
Gross, David L.....26	GlenwoodNov. 5, 1931	Coronary thrombosis.
Haerem, Hans Theodore.....58	Story City.....Feb. 15, 1931	Uremia hypertension.
Hansen, Andreas Schantz.....72	Cedar Falls.....Oct. 25, 1931	Cerebral hemorrhage.
Hennessey, James.....55	EmmetsburgJan. 15, 1931	Acute lobar pneumonia.
Higley, Denison J.....78	GrandviewNov. 24, 1931	Bronchial pneumonia.
Hubbard, Chester W.....56	Mason City.....March 20, 1932	
Joor, Peter.....73	MaxwellAug. 19, 1931	Cerebral hemorrhage.
Kester, George W.....62	Grand Junction.....Nov. 4, 1931	Carcinoma of tongue.
Kime, Sarah A.....73	Fort Dodge.....Oct. 30, 1931	Recurrent multiple cancers.
Little, Burton Dale.....62	WintersetDec. 2, 1931	
Lord, Richard.....63	Cedar Rapids.....April 4, 1932	Heart attack.
Lowery, Oscar W.....86	Des Moines.....Oct. 18, 1931	Chronic mitral insufficiency.
Macrae, Donald, Jr.....62	Council Bluffs.....Jan. 11, 1932	Pneumonia.

McAllister, Benj. R.....65	Mt. Pleasant.....March 10, 1932	
McCue, James G.....63	Silver City.....Jan. 7, 1932	
McMeel, Michael F.....64	ClintonApril 10, 1932	
Meehan, Jos. Jas.....58	DenisonFeb. 26, 1932	
Moershel, William40	HomesteadOct. 27, 1931	Chronic myocarditis.
Myers, Merrill M.....40	Des Moines.....March 26, 1932	
Pitts, Curtis Duane.....65	MaxwellJuly 6, 1931	Diabetes.
Powell, Charles Winborn.....59	Cedar Rapids.....Feb. 20, 1931	Pernicious anemia.
Powell, Preston.....64	AdairFeb. 9, 1931	Rheumatic heart disease—aortic insufficiency.
Prentiss, Henry James.....63	Iowa City.....May 18, 1931	Cerebral thrombosis. Coronary thrombosis.
Printz, Edward T.....75	MoultonJan. 12, 1931	Pneumonia.
Raymer, Henry S.....75	Cedar Rapids.....April 1, 1931	
Ruan, John Arthur.....60	BeaconJan. 12, 1931	Arteriosclerosis.
St. Clair, Frank E. E.....54	HamptonMarch 24, 1931	Cerebral hemorrhage.
Shore, Francis Edward V.....68	Des Moines.....Feb. 9, 1931	Cerebral arteriosclerosis.
Smith, George E.....77	Mt. Pleasant.....March 25, 1931	Uremic poisoning. Chronic nephritis.
Tillmont, Charles Peter.....60	CentervilleMay 29, 1931	Hypertension
Tobin, Russell D.....65	BloomfieldApril 13, 1932	
Waggoner Melanethon R.....57	DeWittSept. 9, 1931	Cerebral apoplexy.
Warren, J. N.....86	Sioux City.....Feb. 20, 1932	
Watson, Edward L.....64	BodeMay 13, 1931	Coronary thrombosis.
Weaver, Arthur J.....67	MuscataineMarch 1, 1932	
Weaver, John Otis.....54	ShenandoahDec. 13, 1931	Cerebral hemorrhage.
Williams, Robert R.....82	ManningMay 8, 1931	Carcinoma of stomach.
Wilson, Maurice Edward.....62	EsthervilleMay 16, 1931	Angina pectoris.
Wright, John Casey.....80	Clear Lake.....May 15, 1931	Pneumonia.

Respectfully submitted,
L. R. Woodward, Chairman.
C. A. Boice, Secretary.

Dr. Boice moved the adoption of the report. The motion was seconded and carried.

REPORT OF THE DELEGATES TO THE A. M. A.

Dr. John F. Herrick, alternate delegate to the American Medical Association, stated that a full report was impossible, since he had made no notes because the late Dr. Macrae was to have made the report. Dr. Herrick reported that the most important action of the meeting was the resolution, which carried by a large majority, advocating the distribution of veterans throughout the country in the private hospitals now being operated and organized in order to save the government an enormous expense. The resolution recommended that the government do not extend government hospitalization of veterans. Dr. Herrick commented upon the intelligent, quiet and dignified discussion of all matters brought before the House of Delegates. Dr. Herrick asked that Dr. Fred Moore report upon a matter in which he had taken a very active part, touching upon one of the members of the State Society.

Dr. Moore reported that the State Society delegates had done all in their power to carry out the instructions given them by the House with regard to the candidacy of Dr. Bierring. Dr. Moore stated that the candidacy of Dr. Cary had progressed to such an extent as to make it unwise to definitely present the name of Dr. Bierring; but that the delegates had continued throughout the past year to carry out the instructions of the House, and that the situation was much more favorable this year. Dr. Moore moved that the delegates to the American Medical Association not only be instructed to advance the candidacy of Dr. Bierring by every honorable means, but that they be instructed to nominate him. The

motion was seconded and carried. Dr. Moore moved that the report of the delegates to the American Medical Association be accepted. The motion was seconded and carried.

REPORT OF THE STATE PHARMACEUTICAL ASSOCIATION JOINT COMMITTEE

Dr. Parker, chairman of the committee, submitted the following report:

Through this committee and the Speakers Bureau we have had a member of the Iowa State Medical Society speak to the pharmacists of the state at each of their eleven district meetings on matters of cooperative interest to the two professions.

Also, the Councilor of our seventh district addressed the Iowa State Pharmaceutical Association at its annual session at Cedar Rapids in February. This address was enthusiastically received and was published in the North West Druggist, their official journal.

Through the efforts of this committee, a representative of the Iowa State Pharmaceutical Association is attending this session, and that association also has an interesting exhibit among our scientific exhibits, which you are not only invited, but urged to visit in order that you may familiarize yourselves with U. S. P. and N. F. preparations, thus discouraging the use of proprietaries, to your patients' physical and your own financial benefit.

The highly satisfactory experience and results of this year have convinced this committee that such activities should not only be continued, but should be enlarged to include other groups. However, since such cooperative activities clearly fall within the province of the Council, this committee would sug-

gest that it be continued as a subcommittee of the Council.

BE IT RESOLVED that the State Pharmaceutical Association Joint Committee be continued as a standing committee of the Council and its powers and duties be enlarged to include all proper professional groups; and that the said Committee shall be known as the Committee on Professional Relations.

Respectfully submitted,

Robert L. Parker, Chairman.

Dr. Parker moved the adoption of the report. The motion was seconded and carried.

The President asked that Dr. Parker introduce a prominent guest, and granted the privilege of the floor to Mr. George Judisch, former president of the Iowa State Pharmaceutical Association.

Mr. Judisch extended to the House of Delegates the greetings of the Pharmaceutical Association and expressed appreciation on behalf of that association for the privilege of cooperating with the Society in the promotion of all things that would tend to the elevation of medicine along honorable and scientific lines. He urged coordination of the efforts of the medical, dental, pharmacy and veterinary professions in legislative activities and expressed gratitude to the members of the medical profession for the support given the legislative program of the Pharmaceutical Association during the last session of the legislature.

The time then being 5:20 p. m., the President asked for a motion to adjourn. Dr. Suchomel moved that the House of Delegates adjourn until 7:00 p. m. The motion was seconded and carried.

The President asked that all delegates assist at the election of the Committee on Nominations before leaving the room.

Evening Meeting, Tuesday, May 3

The House of Delegates reconvened in the Auditorium of the Masonic Temple and was called to order by the President at 7:30 p. m. The Secretary read the names of the Nominating Committee, selected by the delegates from their various districts:

First District—Dr. Nicholas Schilling, New Hampton.

Second District—Dr. Michael J. Kenefick, Algona.

Third District—Dr. Watson W. Beam, Rolfe.

Fourth District—Dr. M. A. Armstrong, Newell.

Fifth District—Dr. Earl B. Bush, Ames.

Sixth District—Dr. William L. Hearst, Cedar Falls.

Seventh District—Dr. Thomas F. Suchomel, Cedar Rapids.

Eighth District—Dr. William S. Binford, Davenport.

Ninth District—Dr. Samuel T. Gray, Albia.

Tenth District—Dr. William F. Amdor, Carbon.

Eleventh District—Dr. R. M. Sorensen, Cumberland.

REPORT OF SPEAKERS BUREAU COMMITTEE Council, Iowa State Medical Society:

During the past year the activities of the Speakers

Bureau have been directed toward the continuance and amplification of the program inaugurated when the Bureau was first organized.

In spite of the heavier load carried by each member of the faculty of the College of Medicine of the State University, caused by the decrease in the state appropriation, they very gladly organized another postgraduate course this year on cardio-vascular diseases and on surgery for the general practitioner. These courses were promoted and handled by the Bureau. They began in the early fall, continued for a period of ten weeks, were offered in five centers in the western part of the state and drew an enrollment of 173 physicians from twenty-seven different counties throughout the state. The popularity of these courses offers a good indication of the interest of the medical profession in Iowa in keeping abreast of medical progress. In some of the centers where these postgraduate courses were held, the men have organized and are asking for more work of this type. This demand is greater than can be met by the present staff of our College of Medicine. However, they are planning to make it possible for the Bureau to offer another course by members of the College of Medicine faculty next fall, preferably in those localities which have not as yet had the advantage of this opportunity. The profession, as well as the Bureau, is deeply indebted to the College of Medicine for its sponsorship of these extension courses, and to the individual faculty members who have so willingly cooperated.

In order to meet the increasing demand for advanced instruction on various phases of medicine and surgery, the Bureau is now planning a symposium on diseases of metabolism and endocrinology, covering a period of ten weekly meetings, at the request of the physicians in the northern part of the state. Men from the medical faculties of our own state University, the University of Minnesota, the University of Nebraska, the Mayo Clinic and men from different parts of Iowa are to present this symposium.

The Bureau endeavors to keep the members of the society posted in regard to its activities and the ways in which the Bureau can be of assistance. Several letters have been sent to county secretaries, offering the aid of the Bureau; a pamphlet was sent to each county, outlining in detail the services the Bureau has to offer; each month, one page of the Journal records the latest activities of the Bureau.

The lists of speakers, those to lay audiences and those to medical organizations, have been kept up to date and have been added to in order to meet the increasing demands from new organizations and for new subjects. There are now about 130 doctors on the list of speakers to scientific groups. Additions to this list are made upon the recommendation of secretaries or presidents of the medical societies or upon the recommendation of the councilor or other officers. Many urgent requests have been sent to the officers of medical groups to report any of their members who have given or have prepared exceptionally good talks or papers on medical topics.

The number of speakers on the list of lay speakers

is nearly double the number of last year. There are about 90 speakers on this list, 63 of whom have been called upon. A year ago requests for lay speakers came mainly from Parent-Teacher Associations and from Federated Women's Clubs. During the past year, the Bureau has sent out over 500 notices to the various lay organizations that speakers for health programs can be secured through the Iowa State Medical Society. As a result of these letters, we now receive requests from Lions Clubs, Rotary Clubs, Kiwanis Clubs, Chamber of Commerce organizations, Community Clubs, Parent-Teacher Associations and Women's Clubs. The next group the Bureau is going to attempt to reach is the high schools and colleges.

Since June, 1930, the Bureau has sent 409 speakers to 240 meetings. Two hundred eighty-two of these speakers addressed 122 meetings of district or county medical societies; 127 speakers went to 118 lay or semi-scientific meetings. Through our speaker placement service we have been able to serve 63 individual county medical societies and we have reached many more counties through the various district and joint county meetings. Of these 63 county societies, 25 have had from two to nine programs arranged through the Bureau. We have sent speakers to lay organizations in 56 different counties, and to more than one group in 22 of these counties. This makes a total of 74 counties to which the Bureau has sent speakers.

Thirty-eight of these meetings were clinics—heart, skin, pediatric, and chest. The Iowa Tuberculosis Association last year scheduled 33 clinics through the Bureau and so far this year approximately 20 of these clinics have been scheduled as regular meetings of the county medical societies. The expenses of these clinics is borne by the Iowa Tuberculosis Association and from the funds for the Christmas seal sale in the local counties where the clinics are held. Among the clinics scheduled for this year, are included several counties which the Bureau has heretofore not reached.

The Speakers Bureau Committee had originally ruled that the expenses of the speakers were to be paid by the organization requesting the speaker. It became apparent that this policy, when applied to lay organizations, was defeating the purpose for which the speakers are sent out. When lay audiences have to pay for their speakers, they feel that the talks are "medical advertising." When the speakers are sent without cost to the lay organizations, the project is regarded, as intended, as an educational program. The trustees therefore ruled that the expenses of these speakers should be paid directly by the Bureau.

The newest project of the Bureau is radio broadcasting. Radio stations WOI at Ames, and WSUI at Iowa City, have both been very anxious to cooperate with the educational program of the state medical society and generously donated a period a week of the broadcasting time of their stations for this purpose. Since the early part of December weekly messages on various phases of preventive medicine

have been prepared by members of the Iowa State Medical Society and broadcast over these stations. These talks are carefully edited and approved by a special committee before being broadcast. The names of the doctors preparing the talks are announced, but no local address is given—they are merely announced as representing the Iowa State Medical Society. Two series of talks, or 16 in all, have thus far been concluded. In accordance with the wishes of the managers of these radio stations, the Bureau agreed to furnish mimeographed copies of these talks to all those requesting them. Four hundred thirty requests for copies have been received, about half of which have been for the entire series of talks. Radio authorities have estimated that for every request received, there are between 1,000 and 10,000 listeners to that program. A very conservative estimate, therefore, would be that more than 430,000 people are being reached through this phase of our educational program. The requests for the talks have been filled at a total cost of around \$90, which averages \$7.50 a week, or less than four cents per copy of each talk. The third series of six talks, which is just beginning, is being prepared by the Bureau of Maternity and Infant Hygiene of the State Health Department.

The results of these radio broadcasts have been very encouraging and the Bureau hopes to greatly expand its work in this field.

Packets of material have been sent to those requesting this service in writing papers, preparing talks, etc. The Bureau has collected a list of films appropriate for both medical societies and lay audiences and has helped several counties in the selection of films for programs. Help has been given members in revising, editing and typing papers.

The Speakers Bureau Committee, during the past year, considered the advisability of preparing health articles to be published in our state newspapers. Tentative arrangements were made with the *Register* and *Tribune* to publish such articles which would be prepared by the state medical society. These articles would take the place of those now appearing, which are syndicated articles, and some financial reimbursement would be made by the newspaper. The Council felt that this work, in addition to the other work of the Bureau, would be too much for one committee, so it appointed another committee to consider this phase of the work.

The following financial statement to date is submitted:

Speakers Bureau Financial Statement.		
From time of organization to March 1, 1932.		
Year	Income	Expenditures
1930.....	\$2,780.00	\$ 306.26
1931.....	3,909.34	3,919.97
1932.....	20.50	2,405.91
Total.....	\$6,709.84	\$6,632.14
Income:		
Postgraduate courses	\$6,475.00	
Incoming traveling expenses....	234.84	\$6,709.84

Expenditures:

Committee members expenses..\$	448.74	
Speakers expenses	568.29	
(\$234.84 has been refunded by county medical societies.)		
Printing	239.08	
Postgraduate courses	3,369.89	
Office supplies	19.25	
Salary	1,898.26	
Telephone and telegraph.....	115.63	
Literature	3.00	6,632.14
		<hr/>
Net profit	\$	77.70

The Speakers Bureau has been in active operation for a year and a half and has in that time financed itself. This includes the payment of the salary of the secretary of the Bureau, which was contemplated by no one when the House of Delegates authorized the organization of the Bureau and the addition of a secretary to take care of the work of that Bureau. This accomplishment has been made possible through the willing and invaluable cooperation of many groups: the College of Medicine, in putting on the extension courses each year; the various men who donate their time and thought in carrying out the work of the Bureau; and to the interest of the medical profession and the public in Iowa in learning the new facts and the truth about medicine. With such elements working in favor of the Bureau, it can only grow more successful as it continues to operate.

Respectfully submitted,

Daniel J. Glomset, Chairman.

Dr. Glomset, chairman of the Speakers Bureau Committee, moved the acceptance of the report as printed in the handbook. The motion was seconded and carried.

REPORT OF THE COMMITTEE ON MILITARY AFFAIRS

Following the presentation to the House of Delegates by this committee of a communication from the Surgeon General of the United States Army to the effect that at least one program of each county society should be devoted each year to a discussion of Military Medical Reserve matters, several counties apparently responded to this request, notably Linn county, at one of its recent meetings.

Such programs should be of value to the profession and this committee will gladly assist any county society secretary in arranging such a meeting.

A lack of interest in recent years has resulted in inactivity on the part of the Military Surgeons Club and your committee would recommend that the organization be made as active as possible. Dr. C. W. Harned, secretary of the club, has requested the cooperation of the committee in calling a meeting of all ex-service physicians during the Sioux City session. At one time the membership of the club comprised nearly half of the eligible physicians in Iowa and this committee would urge that an effort be made to increase the membership far beyond that per-

centage. This committee is therefore, with the cooperation of Dr. Harned, calling a luncheon meeting of the members of the Military Surgeons Club and all other ex-service physicians, to be held at 12:15, Wednesday, May 4, at the Hotel Martin in Sioux City.

Respectfully submitted,

Aaron C. Conaway
Earl B. Bush
Harold A. Spilman
Committee on Military Affairs.

In the absence of Dr. Conaway, chairman of the committee, Dr. H. A. Spilman moved the acceptance of the report as printed in the handbook. The motion was seconded and carried.

REPORT OF THE COMMITTEE ON SUPERANNUATED PHYSICIANS

Dr. W. L. Hearst, chairman of the committee, reported that the program as suggested by the committee at the last annual session would have cost a considerable sum of money. He stated that he had asked the delegates to the American Medical Association to attempt some action on the part of the Association, but that nothing could be accomplished, and that he had been unable to secure information regarding a similar program in other states. He had considered sending letters to the different physicians, asking them to contribute so much per year for the superannuated physicians. To date, no indigent physicians had been reported to the committee; although there were some who needed help, the various county societies had taken care of them. Dr. Hearst suggested that if results were to be accomplished, it would be necessary either that the Board of Trustees appropriate a sum for the purpose, or that the members be asked to contribute individually. He expressed it as his opinion, however, that the proper source would be the American Medical Association. Dr. Hearst moved that the report be accepted. The motion was seconded.

Dr. Kenefick asked by what means a superannuated physician would be so defined. Dr. Hearst replied that the status would undoubtedly be decided by the county society.

Upon vote, the motion carried.

REPORT OF THE MEDICAL ECONOMICS COMMITTEE

The Medical Economics Committee, having been delegated no new task during the past year, has continued to render such services as it could to the officers of the state society and its various component units, as occasion offered. These activities fell into the same fields in which the committee has worked in the past:

Fee Bill

The committee has not made a definite effort to secure adoption of the recommended state fee bill by the various county societies, nor has a report been secured to indicate how generally it has been adopted, although a number of counties have taken such action. During the past year numerous special questions in connection with fees for unusual services have been

referred to the committee and advice given. The committee would urge that the county societies of the state should each give serious consideration to the adoption of the recommended fee bill, with proper modifications, but with the general purpose of maintaining a standard which will not work a hardship upon those societies which do have fee bills because of overlapping into the practice areas of physicians residing in counties which do not adhere to standard fees.

County Contracts

There are now twenty counties in which blanket contracts for care of the indigent sick are in effect with the county supervisors. In two counties—Mahaska and Clinton—the society and the supervisors failed to renew, due to special local situations which could not be overcome at the time, but five new contracts have been completed: Crawford, Guthrie, Louisa, Monroe and Tama counties. Of these, the Guthrie county contract deserves special consideration, since it sets forth an excellent definition of persons eligible to services under the contract, which reads as follows:

"Parties of the first part agree to care for those persons designated by parties of the second part or their legally appointed representatives; but nothing in this provision shall be interpreted to prevent any party of the first part from collecting a fee wherever possible. Parties of the first part may appoint a committee which shall have power to determine the right of any person to receive services under this contract."

At least three counties—Cerro Gordo, Henry and Poweshiek—have modified contracts which consist of a formal agreement with the board of supervisors to pay individual bills on a fixed fee basis, remittances to be made periodically to the county society secretary, who retains a percentage for society expenses and remits the balance to the members rendering the services.

Inquiries regarding the "Iowa Plan" for care of the indigent sick continue to come into the state office from all parts of the United States and a number of county societies in the state are now working upon this problem.

Commercial Agencies Approved

Four agencies offering financial and credit or collection services to Iowa physicians having been approved by the committee last year, requested continued approval in 1932. Since every report and all information available indicated that these agencies had conducted their affairs properly and in accordance with their previous agreements and statements to the committee, the approval in each case was continued for the current year. These organizations are: Business Men's Adjustment Bureau; Iowa Adjustment and Credit Bureau; National School of Honesty; Professional Associates, Inc.

Contract Practice

The Bureau of Medical Economics of the American Medical Association having instituted a survey of the various forms of contract practice, your commit-

tee cooperated by forwarding to the component county societies the questionnaire schedules prepared by the American Medical Association Bureau. The returns were first received by your committee and the contents studied, after which they were forwarded to the Bureau of Medical Economics. The data thus secured were not conclusive, since only thirty-seven counties reported, but a few general deductions were made as far as Iowa is concerned.

Only three societies reported types of contracts which are inimical to the community and the medical profession. These should be dealt with by the local society and they should be supported in their efforts by the state society when necessary. Any contract which does not give a complete coverage of all disability and furnish drugs and supplies should be looked upon with disfavor by organized medicine. All the influence of the society should be used to get a fair price for the services on a contract which completely covers the assured for all disability. This may be a solution to the problem of the high cost of medical service by a spread of the cost over a large number of individuals. Such contracts, as far as possible, should not interfere with the personal relationship of physician and patient, and should work out a method whereby a reasonably free choice of physician by the patient is possible.

Respectfully submitted,

Medical Economics Committee.

By John I. Marker, Chairman.

In the absence of Dr. Marker, chairman of the committee, Dr. James C. Donahue moved the acceptance of the report as printed in the handbook. The motion was seconded and carried.

The President asked Dr. Woodward to call upon members of the special committees of the Council for their reports.

Committee on Nurses Training

In the absence of Dr. Ira N. Crow, chairman of the committee, Dr. W. L. Hearst reported that until the tabulation of questionnaires sent out by the committee was completed, there could be no definite report.

Committee on Cancer Literature

Dr. William Jepson, chairman of the committee, reported that Dr. Rector, representing the American Society for the Control of Cancer, had been in the state for a period of approximately two months, making a survey of the cancer situation of the state, in accordance with an invitation extended to him through the Council. This survey is in the nature of a determination of the facilities presented by the various hospitals for the proper care of cancer patients, and will be used as the basis for any action the society may wish to take in the matter later.

Public Relations Committee

Dr. W. W. Pearson, chairman of the committee, being absent, Dr. Winkler stated that the committee had no report to make at this time.

Dr. Woodward outlined the scope of the commit-

tee and its intention to contact such organizations as the following: Iowa Tuberculosis Association, Iowa Heart Association, Parent-Teacher Association, the Red Cross, Federated Women's Clubs, the Farm Bureau, the W. C. T. U., the Department of Health, and the Medical College of the State University.

Committee on Newspaper Publicity

Dr. Boice, chairman of the committee, read the following report:

Some weeks since, Dr. D. J. Glomset, in conversation with an executive of the Des Moines Register, was told that arrangements might be made whereby the Iowa State Medical Society through its Speakers Bureau might assume responsibility for the conduct of the health column in the above named newspaper. This would entail preparing, at least once a week, a medical article some 900 words in length. This article would be the exclusive property of the newspaper for ten days. Arrangements might also be made for medical broadcasts over stations at Cedar Rapids, Clarinda and Ottumwa. Final arrangements have not been possible on account of the continued absence from the state of the publisher.

It is also proposed to furnish medical articles to the other newspapers of the state, as opportunity presents. These articles would be about 600 or 700 words in length and might be sent out once or twice a week. The plan will entail preparing a list of capable writers on the various phases of medicine, sending the articles thus prepared to the central office and having them put in newspaper parlance by a newspaper writer. This will cost some money, but the committee firmly believes that here is presented a great opportunity for the profession to place before the public clear and unbiased statements on medical problems. Nothing controversial will be included.

The committee will request of the Council further time.

Respectfully submitted,

C. A. Boice, Chairman.

Woman's Auxiliary Advisory Committee

Dr. Boice, chairman of the committee, read the following report:

House of Delegates, Iowa State Medical Society:

As chairman of the above named committee, I have prepared two letters—one to doctors and the other to the doctors' wives. These letters were presented to and approved by the Council. The letters were as follows:

Dear Doctor:

A Woman's Auxiliary to the county medical society should be a part of each county organization. The opportunities and obligations of such an organization are very apparent. Of necessity, the medical profession should and must do considerable education of the laity in medical matters. The Maternity and Child Hygiene program of the State Department of Health will be encouraged by the Council, as representing the state society. This is the correct thing to do. Medical education of the laity should come from but one source—the Iowa State Medical Society. The active and willing cooperation of Dean Houghton of the State University and of Dr. Steelsmith of the State Department of Health are assured. Wives of the doctors have representation in every woman's organization in the county and can exert a potent influence in seeing that any reputable medical education is presented whenever the opportunity offers.

We have no desire to see State Medicine and firmly believe that the medical profession and related organizations owe themselves a duty—as well as a public duty—to meet fairly and squarely the facts of the present day.

We therefore urge that the county society offer its good offices to the ladies in order to organize a Woman's Auxiliary.

Sincerely,

C. A. Boice, M.D., Washington, Iowa,
Councilor, Eighth District, Iowa State Medical Society.

Woman's Auxiliary Advisory Committee:

C. A. Boice, E. C. Junger, J. M. Donelan,
O. A. Kabrick, P. B. McLaughlin.

February 13, 1932.

Dear Madam:

The organization of the wives of the doctors as a Woman's Auxiliary to the County Medical Society is very important. There are many things which such an organization may do. The laity wants medical instruction and much of what it now receives is incorrect and improper.

The ladies have representation in every woman's organization in the county; and when a desire is expressed for a medical lecture or clinic, the matter should immediately be referred to the county medical society or to the Speakers Bureau of the state medical society. We now have a Maternity and Child Hygiene Department of the State Department of Health. The Council of the Iowa State Medical Society will cooperate actively in this educational program and the Woman's Auxiliary has in this a great opportunity to assist the doctors as well as the laity in putting this matter forward, as it should be, under medical control.

Mrs. Channing Smith, of Granger, Iowa, will be more than willing to assist you in getting the Auxiliary under way.

An excellent article appears in the Journal of the Iowa State Medical Society for February, 1932, page 93. Please read it.

Sincerely,

C. A. Boice, M.D., Washington, Iowa,
Councilor, Eighth District, Iowa State Medical Society.

Woman's Auxiliary Advisory Committee:

C. A. Boice, E. C. Junger, J. M. Donelan,
O. A. Kabrick, P. B. McLaughlin.

Members of the Council have sent these letters out and the effect has been good. Auxiliaries are being organized in some of the counties and more are being interested.

Respectfully submitted,

C. A. Boice
O. A. Kabrick
P. B. McLaughlin
J. M. Donelan
E. C. Junger

REPORT OF THE HISTORICAL COMMITTEE

House of Delegates, Iowa State Medical Society:

The Historical Committee has devoted its efforts during the past year toward collecting interesting data connected with the History of Medicine in Iowa and publishing the same each month in a special department of the JOURNAL.

New biographic sketches of pioneer physicians have been recorded, as well as a number of instances of succeeding generations of Iowa practitioners in the same family.

The increasing number of examples of continuous practice comprising periods of fifty years and more exemplify the devotion of Iowa doctors to the art and service of medicine.

Complete histories of county medical societies in Marion, Washington and Scott counties have been collected, constituting valuable information for future reference.

Fee bills prevailing sixty and seventy-five years ago have been published for comparison with those in force today to indicate the medical economic changes during this time.

The publication of interesting old medical diplomas granted to the earlier practitioners has served to illustrate the changes and progress of medical education as connected with Iowa history.

The committee acknowledges its obligation to the officers of county medical societies and other members of the state society who have so kindly cooperated

in this effort to collect and record accurate historical facts pertaining to the development of medical practice in Iowa.

Respectfully submitted,

Walter L. Bierring, Chairman.

Dr. Bierring being absent, no further report was made.

REPORT OF THE FINANCE COMMITTEE

Dr. E. C. McClure, chairman of the committee, stated that for many years the only function of the Finance Committee had been to audit the books; that heretofore the committee had made a report up to May 1; that last year the committee had made a report which was not published in the JOURNAL, although another report was published. He further stated that in making a report from January 1, 1931, to January 1, 1932, there would be a six months' period omitted, which would cause some confusion. He asked for the instruction of the House of Delegates; since a report which he could make under the new system would have no comparative value with other years.

Dr. Harkness explained that the change in the date of the audit had been inaugurated in order to avoid confusion in working out a budget on the basis of dues paid for the calendar year, and pointed out that the constitution requires that the audit be made from the first of the year, a requirement which had been overlooked in recent years.

Dr. Winnett read Chapter II, Sec. 3 of the by-laws which designates the fiscal year of the Society as the calendar year.

Dr. Harkness further explained that the audit for this year included a reaudit from January 1, 1931.

The President asked that the speakers address the chair, and asked if there were any instructions for Dr. McClure and his committee. The President ruled that there was no motion before the House.

REPORT OF COMMITTEE ON PUBLICATION

Since the meeting of the House of Delegates in 1931, the Publication Committee has sponsored the publication of twelve monthly issues of the JOURNAL. These journals testify to the activity of the committee and in themselves constitute a detailed report. Upon authority of the trustees the JOURNAL has been maintained in its same page volume, despite the fact that advertising has decreased, and the JOURNAL has not received a sufficiently increased revenue from advertising to entirely maintain the increase in page volume.

Journal Statement for Past Five Years

Year	Pages Reading	Per Cent Increase		Pages Adv.	Per Cent Increase		Adv. Income	Per Cent Increase	
		Over 1927			Over 1927			Over 1927	
1927.....	460	..		370	..		\$6,341.46	..	
1928.....	450	7		380	3		6,837.54	8	
1929.....	554	20		384	4		7,571.20	20	
1930.....	586	27		394	7		6,986.28	10	
1931.....	714	55		378	2		7,863.09	24	

The accompanying table, which reckons the ratio of reading material and advertising for the past

five years, is intended to indicate the effect that the present period of depression has had upon the JOURNAL. It will be noted that the pages of reading have increased from 460 in 1927, to 714, or 55 per cent, in 1931. Advertising has not shown this increase, there being 370 pages in 1927, and 373 in 1931, or an increase of only 2 per cent. However, it will be noted that the revenue derived from this advertising has shown a material, though not equal, increase. In 1927, \$6,321.46 was derived from advertising, whereas in 1931, the revenue so secured was \$7,863.09, or a 24 per cent increase.

It is obvious that this increase cannot be explained by an increase in paid space. Explanatory of this item, it may be said that the Cooperative Medical Advertising Bureau of the American Medical Association, through which the bulk of our advertising is received, allowed us an increase in advertising rates, since they felt that "the larger size, improved appearance and greater interest" in the JOURNAL warranted such an increase. It is indeed fortunate for us that this increase was approved at the time when it was most needed, so that the JOURNAL today instead of showing a decrease as might have been expected during this period of depression, actually shows an increase in revenue. Indicative of the national situation regarding medical advertising, allow me to quote from Mr. E. W. Mattson, manager, Cooperative Medical Advertising Bureau: "No doubt every publisher is interested to know what the real advertising situation seems to be. Frankly, it is not yet very encouraging so far as contracts are concerned. However, advertising agencies and advertisers are very confidently looking forward to the resumption of business and the outlook is hopeful. There are already indications that stocks of merchandise have been depleted to the point where there may soon be a shortage and in the face of an increasing demand with the ability to buy, prices will advance. The improvement may be slow, probably will be, prices for goods may vacillate like the needle of a compass but may definitely settle down when the fall business season opens."

Only one new department has been added to the JOURNAL during the past year. That, entitled "Interesting News in Brief," has been placed in the section with the Personal Mention column and a few of our readers have been kind enough to state that they felt the section was not only interesting, but profitable. The section reporting the activities of the various county societies continues to be a very interesting section and has attracted the attention not only of many of our local readers, but also of the officers of the national society in Chicago.

In many of our issues we are able to publish the transactions of as many as fifty to seventy per cent of all county society proceedings. Through this spirit of hearty cooperation which has everywhere been manifest your editor has been able to enlarge, and we hope, add to the effectiveness of the editorial section of the JOURNAL. Many of the editorials presented have been furnished by authorities on the given subject and the editor at this time wishes to

express his sincere thanks to all special contributors. The financial condition of the Journal is reported in detail elsewhere.

R. R. Simmons,
Editor and Chairman of the
Publication Committee.

In the absence of Dr. Simmons, no further report was submitted.

The President asked the Secretary to read any memorials or communications which should come before the Society.

Dr. Parker read a letter from Dr. T. U. McManus, addressed to President Smith, in which he expressed his regret at his inability to attend the meeting. Dr. Parker announced that Dr. McManus was ill and moved that the Secretary be instructed to transmit a telegram of good wishes from the House. The motion was seconded and carried.

Dr. Parker read a communication from the Clarke County Medical Society, approving the resolutions of the Twin Lakes Medical Society with regard to contract and insurance practice of medicine, approving the policies and work of the State Society, and recommending a reduction in expenses with consequent reduction of dues. Dr. Parker moved that the communication be received. The motion was seconded and carried.

Dr. Parker moved that the following life members of the State Society be endorsed for Affiliate Fellowship in the American Medical Association:

Ferdinand J. Smith, M.D., Milford; F. S. Smith, M.D., Nevada; H. C. Finch, M.D., Pulaski; John W. Craig, M.D., Lohrville; George Hofstetter, M.D., Clinton.

The motion was seconded and carried.

NEW BUSINESS

Dr. Suchomel announced that Dr. George Donohoe, of Cherokee, had that day undergone a very serious operation at Rochester. Dr. Suchomel moved that the Secretary be instructed to send a telegram to Dr. Donohoe. The motion was seconded and carried.

Dr. E. B. Williams, for many years a member of the Commission on Insanity, stated that for the past few years the attitude of the public had seemed to be that the mentally afflicted of the state could receive satisfactory treatment only at the Psychopathic Hospital at Iowa City. Dr. Williams moved that a motion to appoint a committee to study the institutions for the mentally afflicted and study the attitude of the public to those institutions, particularly the Psychopathic Hospital at Iowa City and the other four hospitals for the insane, be considered at the Friday morning meeting. The motion was seconded and carried.

Dr. Spilman moved that Dr. George W. Hinkle, of Harvard, in Wayne County, be granted life membership in the State Society. The motion was seconded and carried.

In the absence of Dr. Fred Moore, chairman of the Committee on Child Health and Protection, the

President asked Dr. E. D. Plass to read the report of that committee.

Report of Committee on Child Health and Protection

This Committee is the result of the widespread interest in our profession and among the laity in the subject of child welfare. Its direct antecedent is the White House Conference on Child Health and Protection which was held in Washington, D. C., in November, 1930, and February, 1931.

Your committee was not delegated with specific responsibility or authority. It has assumed that its function should be:

1. Advisory to the Society in the field of child welfare and pediatrics.

2. Liaison between the Society and the laity—especially in health activities in this field.

Our fundamental thesis has been that of cooperation of all interested groups. Every movement has been guided in that manner which we thought would best enlist the interest of qualified medical practitioners and give them such opportunity for leadership as their abilities might entitle them to. It has not been feasible to have a meeting of the full committee membership. However, frequent contacts have been made by four members of the committee and it has been possible to initiate some activities. The local members of the Committee have had repeated conferences for consideration of pediatric interests. These conferences have been held with the following groups:

1. Local pediatricians
2. Local general practitioners
3. Officials of State Health Department
4. Officials of City Health Department of Des Moines
5. Officials of State Department of Public Education
6. Officials of Board of Education of Des Moines
7. Officials of State Bureau of Child Welfare
8. Officials of Iowa State Tuberculosis Association
9. Officials of local Public Health Nursing Association

In this manner there has been a unity of purpose and procedure between this committee, the pediatricians of Iowa, and the above organizations. This has made it possible to keep objectives and procedures in unison with the best thought and plans of people and organizations whose scope and viewpoint are national. The members of this Committee have cooperated with the Speakers Bureau of the Iowa State Medical Society in the following activities:

1. Providing pediatric programs for county and district societies.

2. Providing speakers for lay meetings for presentation of subjects pertaining to medical phases of child health and protection.

3. Radio presentation of medical subjects pertaining to child health and protection.

The Committee has devoted the major part of its energies to the development and guidance of the Iowa White House Conference on Child Health and Protection, especially to the medical sections of that conference. The chairman of this Committee was

chairman of the Medical Section of the Conference and subsequently made chairman of the general program committee of that Conference.

Practically all of the men engaged in pediatrics in the state contributed to the investigation and program of the Conference. The active assistance of men engaged in obstetrics was obtained and the interest of many general practitioners was enlisted.

The Conference was highly successful. The attendance was state-wide and exceeded a thousand in number. The meeting place was filled for the first and the last numbers of the program. Some eighty papers, dealing for the most part with conditions in Iowa, were presented. Thirty-six of these were offered by men of the medical profession—either pediatricians, obstetricians, general practitioners or public health men. The active interest and support of the officers of the Medical Society was constantly manifest in the development of the Conference. Channing G. Smith, President of the State Society, presented a paper in the Public Health Section.

The medical section of the Conference presented as guest speaker, Dr. E. H. Cary, of Dallas, Texas, president-elect of the American Medical Association. We wish that every member of the Society could have heard him express his forward-looking views of the doctor's responsibilities in Child Health and Protection. His opinion of the wisdom of medical cooperation and leadership in all these activities is stated in positive terms.

This Committee with the Medical Section of the Iowa White House Conference has sponsored the pediatric program which is to be offered at this session on Friday morning.

Publicity: In all these activities attention has been given to publicity in the medical and lay press.

1. Medical: The Journal of the Iowa State Medical Society has been generous in the space given to accounts of these activities.

The monthly Bulletin of the Des Moines Academy of Medicine and Polk County Medical Society has published such medical news.

2. Lay Press: The Iowa White House Conference received almost as much publicity in the press of the state as the American Association for the Advancement of Science which met in Des Moines two years ago. This publicity was handled by Mr. T. J. Edmonds, of the Iowa Tuberculosis Association. Including all publications preceding, during and since the Conference, there were 4,940 stories which occupied 36,961 column inches. The following incident is apropos: A reporter interviewed Dr. Cary on the second day of the Conference. Dr. Cary said, "What do you want me to talk about—Child Welfare?" The reporter answered, "No! We have not had anything else for days. Give us something different."

3. Arrangements have been made with the Journal of the Iowa State Medical Society to publish a pediatric number at an early date.

Discussion

We believe that this Committee should be continued. It is obvious to one who studies the adminis-

trative setup of this Society that the committee overlaps some of the activities of the Council. Since much of the work of this Committee on Child Health and Protection is closely allied with public relations, publicity, and the Speakers Bureau, we move that it be identified in some manner with the activities of the Council.

Respectfully submitted,

Fred Moore, Chairman.

Dr. Plass moved that the report be accepted. The motion was seconded.

Dr. Woodward spoke of the difficulty of the Council in properly coordinating the various society activities, since in some instances there was overlapping of work and in others the work was not done at all. He suggested that the Committee on Child Health and Protection might be worked into the Committee on Public Relations, rather than to maintain a separate committee.

Upon vote, the motion was carried.

Dr. Fay moved that the dues of the Iowa State Medical Society for the ensuing year be fixed at \$10.00 per year, and stated that he made the motion in order to put the question before the House. The motion was seconded.

Dr. Harkness explained the budget under which the Society was operating and stated that if the dues were reduced to \$10.00, which might mean some slight increase in membership, the Society could probably operate on the present budget, but cautioned the delegates against the inauguration of new activities.

Dr. Boice stated that in the past two years a considerable amount of money had been expended by two committees in the conduct of their duties, the Committee on Medical Education and Hospitals, and the Committee on Public Policy and Legislation. He recommended that the dues be high enough so that the work of the latter committee should not be limited.

Dr. Winnett stated that the Society had a reserve of approximately \$44,000. He suggested that the Society might lower the dues and during the present emergency spend part of that reserve.

Dr. E. L. Wurtzer announced that the Cerro Gordo County Medical Society had instructed him as delegate to vote for dues of \$7.50 and no more.

Dr. Erskine asked whether the Society could be run for the ensuing year at the present level of activities, if the dues were \$7.50, the number of members approximately the same, and if the Society accepted a deficit of \$5,000 for the year. Dr. Harkness replied that the dues would have to be at least \$8.00.

Dr. H. B. Young moved an amendment to the motion, that the dues for the coming year be \$7.50. The motion was seconded.

Dr. E. B. Bush stated that if the dues were \$7.50 the Society would run about \$6,500 behind, and would be just where it was last year. He pointed out that the creation of a governing board of fifteen men would cost a considerable sum of money.

Dr. Winnett stated that if the reserve were re-

duced until it became necessary to sell some of the Liberty Bonds, the Society would lose a thousand dollars because of the present market value of the bonds.

Dr. Bellinger expressed the opinion that the eleventh district would support the continuance of \$12.00 dues.

Dr. McClure suggested that the Society run for a year or two on \$7.50 dues, using some of its reserve fund, and at the end of that time raise the dues, in order to increase the membership.

Dr. E. B. Howell reminded the House that in past years there had been as vigorous protest against raising the dues from \$5.00 to \$7.50.

Dr. Roland Stahr stated that if the organization had been more active in past years there would not be the present need for a large appropriation for legislative work.

Dr. William Jepson expressed the opinion that rather than permit the Society to run into debt, it might be wiser to make a drastic cut in expenses, including reduction of salaries.

Dr. M. J. Kenefick recommended a reduction of salaries and questioned the necessity of the present amount of stenographic help in the central office.

Dr. James J. Noonan recommended that those societies not having contracts for the care of the indigent sick make an effort to effect such contracts, and that the dues be paid from the funds thus received.

Dr. A. F. Fritchen stated that the substance of the problem was how much the dues should be lowered; and questioned whether the difference of a dollar or two would be protested by many members.

Dr. B. J. Dierker reported that the Lee County members would appreciate any economies that could be practiced, but would be perfectly willing to pay dues of \$12.00 if that amount were necessary to carry on the work of the Society.

Dr. McClure asked for an expression of opinion from the President.

President Smith: I have adopted the attitude of taking no side in any controversial issue in order that I might preside as fairly as possible. If you ask me what I think the dues should be for the coming year, I would say \$7.50. We would have to cut into the reserve fund. If the members of the State Society realize that they are receiving the benefit from the dollars which they pay they do not care how much they pay. The members of the State Society do not believe that they are getting \$12.00 worth. Until they do realize the fact that the State Society and organized medicine is worth one or two dollars a month, or whatever amount is necessary, and will willingly pay, we should reduce the dues until they do. There is a reason for having a large surplus. Certainly there will be times when the Board of Trustees will be called upon for expenses that are not anticipated. If we have a fund in the treasury of \$50,000, the interest on that sum will amount to at least \$2,200 a year. If this sum were coming in it would take care of any ordinary extra

expenses that occur, but at the same time I guessed that 1,800 men would pay \$12.00 a year. I was wrong—more than 2,000 have paid. The Board of Trustees estimated that 1,900 would pay. However, there has been an intensive campaign all year long to get the men to pay their dues. I misunderstood the reading of the resolution passed last year fixing the dues. I have gone all over the state stating that the dues would automatically revert to \$7.50. I was mistaken and the blame is to be laid to me if anyone has that opinion. To me it is more important to have 2,350 or 2,400 members of the Society at \$5.00 a year than to have 1,800 or 2,000 at \$12.00 a year. The primary purpose of all medical societies is scientific training. The first medical society, organized in 1637, had as its purpose "to increase medical training and scientific knowledge." Other duties are secondary. It is necessary that we look after material needs that surround us. These will cost money. We can run this State Society on less money than we are doing right now, and carry out the activities with less money than is being expended. This is not the fault of the Trustees. If you understood and realized the amount of time, thought and worry that these three men put in on trying to conserve our finances and run the activities of the Society properly, you would appreciate their work much more than you do now. When the House of Delegates, however, adopts programs which require money, the constitution requires that the Trustees appropriate money for these programs. The item of traveling expenses should not be cut. The Council and members of the different committees should have their expenses paid. From a psychological standpoint I feel that it would be wise to cut the dues to \$7.50, cut the budget down as much as possible, and carry on the present activities, expecting to have a deficit this year.

Dr. Harkness corrected a misunderstanding in regard to the cut in the salary of the editor and explained that the editor had volunteered to accept a cut in salary because part of his work was turned over to the personnel in the central office. He stated that the first part of the constitution said that the Society was a scientific body, but that it also said that the Society was to look after the material welfare of its members, that in this age the economic factor of the medical profession was one of the prime requisites; that with \$7.50 dues some of the activities would have to be curtailed.

Dr. Young pointed out that if a member of a county society pays \$12.00 dues he cannot carry on the activities of the county society, and asked if it were not an unwise thing to cripple the county society.

Dr. W. N. Moore recommended that a prospectus be sent to members describing the activities and aims of the Society.

Dr. Walter Campbell stated that in order to follow the work done in the last session of the legislature, he would gladly pay \$50.00 dues rather than permit the osteopathic legislation to go through, which was attempted at the last general assembly.

Dr. J. C. Donahue suggested that as an educational

campaign the Society should hire "missionaries" to go into the various counties and sell the State Society program to non-members; to talk to individual men.

Dr. Boice pointed out that since the reorganization of the Society in 1903, the Council had been carrying on a progressive program of selling the State Society program to members and non-members, with a resultant enormous increase in membership, in interest and in activities.

Dr. Fay moved that Dr. Glomset be given the privilege of the floor to correct a misunderstanding in regard to the Speakers Bureau. The motion was seconded and carried.

Dr. Glomset: There seems to be a misunderstanding as to the Speakers Bureau activities and as to the cost to the Society. At the present time it has not cost the Society one single red cent to conduct the Speakers Bureau. We have paid for our own stenographer. We have not paid rent, but we are about \$400 ahead. Contrast that with such a state as Illinois, where the Speakers Bureau costs the society \$12,000 a year. In Minnesota it costs them \$2,400 a year. In Wisconsin the Bureau costs the society a large sum. They are paying for the scientific benefit they receive from the Speakers Bureau in every state except Iowa.

Dr. Parker asked that the Nominating Committee meet and organize. Dr. Parker read the provisions in the constitution regarding the Nominating Committee.

Upon motion, seconded and carried, the meeting adjourned at 9:40 p. m.

THIRD MEETING, FRIDAY, MAY 6

The House of Delegates convened for its fourth session in lodge room No. 3 of the Masonic Temple on Friday morning, May 6. President Smith called the meeting to order at 8:02 a. m. The President announced that if there were no objection, roll call would be by registration. The President declared that a quorum was present.

The Secretary read an abstract of the minutes of the preceding meetings, which on motion duly seconded and carried, was approved.

The President called for the report of the Committee on Nominations, which was presented by Dr. M. A. Armstrong, of Newell, Secretary of the Committee.

Report of the Committee on Nominations

Your committee recommends the following nominations:

Officers

President-elect: C. A. Boice, Washington; Gordon F. Harkness, Davenport; C. B. Taylor, Ottumwa.

First vice president: W. W. Bowen, Fort Dodge.

Second vice president: E. C. Cobb, Sioux City.

Councilors: First district, F. A. Hennessy, Calmar; sixth district, W. L. Hearst, Cedar Falls; eleventh district, M. C. Hennessy, Council Bluffs.

Trustee: E. M. Myers, Boone.

Standing Committees

Medico-legal: Frank A. Ely, Des Moines.

Public Policy and Legislation: Thos. A. Burcham, Des Moines; Frank L. Williams, Des Moines; Peter A. Bendixen, Davenport.

Constitution and By-laws: C. B. Taylor, Ottumwa; John H. Peck, Des Moines; F. J. Swift, Maquoketa.

Finance: E. C. McClure, Bussey; Reu L. Barnett, Atlantic; Andrew W. Bennett, Iowa City.

Special Committees

Medical Library: F. A. Hennessy, Calmar; C. R. Harken, Osceola; Jeannette Dean-Throckmorton, Des Moines.

Military Affairs: A. C. Conaway, Marshalltown; H. A. Spilman, Ottumwa; T. F. Suchomel, Cedar Rapids.

Medical Economics: John I. Marker, Davenport; Ratford F. Childs, Audubon; Corwin S. Cornell, Knoxville; James C. Donahue, Centerville; J. C. Hill, Newton.

Historical: Walter L. Bierring, Des Moines; Frank M. Fuller, Keokuk; William Jepson, Sioux City; Arthur D. Woods, State Center; John T. McClintock, Iowa City.

Superannuated Physicians: W. L. Hearst, Cedar Falls; W. F. Amdor, Carbon; W. S. Greenleaf, Atlantic.

Medical Education and Hospitals: A. W. Erskine, Cedar Rapids; A. V. Hennessy, Council Bluffs; Louis F. Talley, Marshalltown.

Child Health and Protection: Fred Moore, Des Moines; E. D. Plass, Iowa City; J. D. Boyd, Iowa City; Lee F. Hill, Des Moines; H. E. Farnsworth, Storm Lake.

Woman's Auxiliary Advisory: C. A. Boice, Washington; E. C. Junger, Soldier; O. A. Kabrick, Grandview; James M. Donelan, Glenwood; P. B. McLaughlin, Sioux City.

Your committee recommends that the 1933 annual session be held at Des Moines during the second week of May.

It is the sentiment of your committee that the first meeting of the annual session of the House of Delegates be called on the first day of the regular scientific program.

Respectfully submitted,

M. A. Armstrong, Secretary.

The President appointed the following members to act as tellers during the balloting for President-elect: Dr. E. C. McClure, Bussey; Dr. T. A. Burcham, Des Moines; Dr. Roland Stahr, Fort Dodge. The votes cast were as follows: Taylor, 33; Boice, 17; Harkness, 15. The President announced the nomination of Dr. Taylor as President-elect.

Dr. Suchomel rose to a point of order concerning the election of members of the Committee on Medical Education and Hospitals and read the resolution which he had introduced at the 1931 session:

"RESOLVED that the recommendation of the Nominating Committee relative to making the Committee on Medical Education and Hospitals a stand-

ing committee, be reported to the Committee on Constitution and By-Laws for consideration at the next meeting of the House of Delegates."

Dr. Burcham moved that the roll be called. The motion was seconded and carried. Roll call showed the presence of 17 officers, 45 delegates and 10 alternates, a total of 72.

Dr. Boice moved that the House cast a unanimous vote for Dr. Taylor as President-elect. The motion was seconded and carried.

Dr. Suchomel moved that the secretary be instructed to cast a unanimous ballot for the House of Delegates for the remainder of the nominations, with the exception of the members of the Committee on Medical Education and Hospitals. The motion was seconded. The President declared that unless there were an objection by some member, the motion would be held in order. The motion carried.

REPORT OF THE FINANCE COMMITTEE

Dr. E. C. McClure, chairman of the committee, reported that it was impossible to make a report, since the necessary vouchers had been left in Des Moines. He recommended that the committee make an audit and report from July 1, 1931, to January 1, 1932, then shortly after January 1 of the next year, make another report which will cover the calendar year and be printed in the handbook next year. He recommended that the report of the Finance Committee be printed in the JOURNAL, and moved that a resolution be adopted to the effect that the Finance Committee make such a report and that it be printed in the JOURNAL. The motion was seconded. The President asked the Board of Trustees if they would approve the expense of printing the report in the JOURNAL. Dr. Fay assented. Upon vote, the motion carried.

REPORT OF THE HISTORICAL COMMITTEE

Dr. F. M. Fuller, a member of the committee, stated that no organized report would be made aside from that printed in the handbook. He requested the members to send in all material available that would be of interest in compiling a history of medicine in Iowa. Dr. Fuller moved the acceptance of the report of the Historical Committee. The motion was seconded and carried.

REPORT OF PUBLICATION COMMITTEE

In the absence of Dr. Simmons, chairman of the committee, Dr. Fay moved the acceptance of the report of the committee as published in the handbook. The motion was seconded and carried.

REPORT OF THE TREASURER

Dr. Junger moved to accept the report of the Treasurer as printed in the handbook. The motion was seconded and carried.

Dr. Parker read the following names of members for whom life membership had been requested:

Audubon county: John Riley, Exira.

Buena Vista county: B. B. Bridge, Albert City.

Calhoun county: A. C. Norton, Rockwell City.

Greene county: William Young and B. C. Hamilton, Sr., Jefferson; John H. Shipley, Rippey.

Hancock-Winnebagos county: Harry F. Thompson and P. H. Vesterborg, Forest City.

Jasper County: H. V. Beyers, Marion Hammer, Sr., and Perry Engle, Newton; J. F. Harp, Prairie City.

Kossuth county: M. J. Kenefick, Algona.

Madison County: R. R. Davisson, Winterset.

Polk county: Sophie Hinze Scott and William Stevenson, Des Moines.

Sac county: A. Groman, Odebolt.

Story County: F. S. Smith, Nevada.

Woodbury county: E. A. Jenkinson, Sioux City.

Dr. Alcock moved that these members be voted life membership by the House. The motion was seconded and carried.

UNFINISHED BUSINESS

Dr. Suchomel moved that the Medical Education and Hospitals Committee be made a standing committee of the Society. The motion was seconded and carried.

Dr. Spilman moved that the men named by the Nominating Committee for the Committee on Medical Education and Hospitals be elected by the House of Delegates. The motion was seconded and carried.

The President called for a vote upon the amendment proposed by Dr. H. B. Young, that the dues remain \$7.50. The amendment was lost.

The President called for a vote upon the original motion that the dues be \$10.00. The motion carried.

NEW BUSINESS

Dr. Williams introduced the following resolution and moved its adoption:

Whereas, There seems to be a growing feeling that our mental or insane patients can get scientific care and study only at the Psychopathic Hospital at Iowa City and that our other hospitals for the diseased mind, or the insane, are only asylums to be avoided,

Be It Resolved, By this House of Delegates that each one consider himself a committee of one to educate the people of the State of Iowa to appreciate the good work of our other four institutions for the care and cure of the insane, and to urge upon the authorities in control of these institutions that not one, but all, continue to keep the care and treatment up to the highest possible level from the standpoint of both the scientific alienist and the humanitarian. The motion was seconded by Dr. Erskine and carried.

Dr. F. A. Hennessy moved that the problem be referred to the Committee on Medical Education and Hospitals. The motion was seconded and carried.

Upon motion by Dr. McLaughlin, which was seconded and carried, the meeting adjourned at 9:15 a. m.

Respectfully submitted,

Robert L. Parker, Secretary.

SOCIETY PROCEEDINGS

Adair County Annual Meeting

The Adair County Medical Society met in Greenfield, Wednesday, June 15, and elected the following officers to serve during 1932-33: Dr. L. H. Ahrens of Fontanelle, president; Dr. R. M. Chapman of Bridge-water, secretary; Dr. A. S. Bowers of Orient, treasurer; Dr. Edna Sexsmith of Greenfield, delegate; and Dr. John Stoll of Fontanelle, alternate delegate.

Cass County

Tuesday, June 14, the Cass County Medical Society met in regular session at the Arlington Hotel in Griswold. Following a six-thirty dinner, a paper was read by A. Weaver, M.D., of Cumberland on Carpal Fractures and Their Significance. The paper was well presented and elicited a lively discussion at its conclusion. It was decided to hold our next meeting September 13, and to resume our monthly meetings at that time.

R. M. Sorenson, M.D., Secretary.

Cerro Gordo County

The members of the Cerro Gordo County Medical Society entertained their wives at the Clear Lake Country Club, Tuesday, June 21, at a seven o'clock dinner. During the dinner, the Orphean Orchestra of Mason City furnished the music. After a program of entertainment, Mr. Gerald Blake, assistant attorney-general, gave an address on Law Enforcement. Mr. Herman B. Carlson and Mr. George N. Lyman, directors of the law enforcement division, were present.

T. E. Davidson, M.D., Secretary.

Clinton County

Nearly fifty physicians and their wives attended the banquet, Thursday, June 16, which the Clinton County Medical Society tendered to the physicians of the county who had been in practice fifty years. The four doctors thus honored were: Dr. A. W. Blunt, Dr. G. A. Smith, Dr. George Hofstetter, and Dr. H. M. McKenzie; as well as Mrs. Blunt and Mrs. Hofstetter. Following the banquet, during which Dr. F. A. Hohenschuh presided as toastmaster, each one of the guests spoke briefly, reminiscing on the treatments and hardships of the early days of medical practice.

Ralph F. Luse, M.D., Secretary.

Hancock-Winnebago Society

The Hancock-Winnebago Medical Society held a heart and lung clinic at Garner, Friday, June 24, and a busy and interesting afternoon was spent examining thirty-two patients. John H. Peck, M.D., of Des Moines, leading the lung section, brought out several new and fine points in examining technic. Daniel

J. Glomset, M.D., also of Des Moines, conducting the heart section, ably demonstrated several cases of cardiac neuroses. The after dinner program consisted of lantern slides and lectures, Dr. Peck showing lung pictures, not only of tuberculosis, but other lung conditions, and Dr. Glomset explaining a series of nervous heart cardiograms, and making a strong plea for more careful examination and attention to this class of patients.

W. F. Missman, M.D., Secretary.

Jackson County

The Jackson County Medical Society and its Auxiliary enjoyed their annual catfish dinner at Oak Lodge in the Bellevue State Park, Thursday, June 9. The attraction in the morning was golf, followed by a noon reception and dinner, with the scientific program consisting of a paper on Acute Intestinal Obstruction, by Professor A. G. Pfohl of Iowa City; one on Nascent Serum Therapy, by J. F. Ritter, M.D., of Maquoketa; and one on Transurethral Prostatectomy, by Nathaniel G. Alcock, M.D., of Iowa City.

Marshall County

The last meeting of the Marshall County Medical Society before the summer vacation was held Wednesday, May 25, at the Elmwood Country Club, when the members entertained their wives, physicians from nearby towns and other guests. Preceding the six-thirty dinner, the following scientific program was presented: Breech Presentation, Manuel Steigel, M.D., of Chicago; Common Causes of Blindness in Elderly Persons, Cecil S. O'Brien, M.D., of Iowa City; and Cicatricial Contractures of the Upper Extremities, Arthur Steindler, M.D., also of Iowa City.

Mills County

The June meeting of the Mills County Medical Society and Auxiliary was held at the state institution, Glenwood, June 16. I. U. Parsons, M.D., of Malvern, reported on the House of Delegates; George Mogridge, M.D., of Glenwood spoke on Medical Economics; H. B. Dye, M.D., also of Glenwood, talked on Laboratory Methods for the General Practitioner; and D. W. Harmon, M.D., of Glenwood, led a discussion of clinical cases.

J. M. Donelan, M.D., Secretary.

Muscatine County

Frederick H. Lamb, M.D., of Davenport, presented the scientific program for the Muscatine County Medical Society at a meeting held in Muscatine, Monday, May 16, giving an illustrated lecture on The Blood Picture and Certain Related Clinical Implications.

C. P. Phillips, M.D., Secretary.

Scott County

The regular monthly meeting of the Scott County Medical Society was held Tuesday, June 7, at the Davenport Chamber of Commerce, with Arthur W. Erskine, M.D., of Cedar Rapids, the speaker of the evening. Dr. Erskine spoke on The Graham-Cole Test.

Austin Flint-Cedar Valley Medical Society

The following program is to be presented at the coming meeting of the Austin Flint-Cedar Valley Medical Society, to be held in Waterloo, Tuesday, July 12:

- 9:30 A. M.—Pediatric Clinic, Maurice L. Blatt, M.D., Cook County Hospital, Chicago.
 10:30-11:30 A. M.—Heart Clinic, B. F. Wolverton, M.D., Cedar Rapids.
 11:30 A. M. to 12:00 M.—Business Meeting.
 12:00 M. to 2:00 P. M.—Luncheon. Address, Walter L. Bierring, M. D., Des Moines.
 2:00-3:00 P. M.—Address, Maurice L. Blatt, Chicago.
 3:00-3:45 P. M.—Surgical Clinic, F. R. Peterson, M.D., Department of Surgery, University of Iowa, Iowa City.
 3:45-4:15 P. M.—The Woman Damaged by Child Bearing, L. L. Carr, M.D., Clermont. Discussion, J. H. Butts, M.D., Waterloo.
 4:15-4:45 P. M.—A Logical Method of Therapeutics, F. W. Porterfield, M. D., Waterloo. Discussion.
 4:45-5:30 P. M.—Treatment of Extrophy of the Urinary Bladder and Other Congenital Abnormalities. Moving pictures. Waltman Walters, M.D., Mayo Clinic, Rochester.
 6:00 P. M.—Banquet. Address, Louis B. Wilson, Mayo Foundation, Rochester.

C. C. Hall, M.D., Secretary.

Des Moines Valley Medical Society

The fifty-ninth annual meeting of the Des Moines Valley Medical Society was held Tuesday, June 14, at the Ottumwa and St. Joseph's Hospitals in Ottumwa. The morning session, which was held at the Ottumwa Hospital, consisted of two special addresses: Errors in Surgical Diagnosis, by William A. Rohlf, M.D., of Waverly, and Diagnosis and Treatment in Rectal Disorders, by Louis A. Buie, M.D., of Rochester, Minnesota. After a noon luncheon at the Ottumwa Country Club, the afternoon session was held at St. Joseph's Hospital and the following papers closed the meeting: Bronchial Asthma, Fred W. Gaarde, M.D., Rochester; Syphilis in Childhood, Philip C. Jeans, M.D., Iowa City; and Fractures of the Wrist, Arthur W. Erskine, M.D., Cedar Rapids. Newly elected officers are: Dr. Ira N. Crow of Fairfield, president; Dr. J. C. Kepler of Kirksville, Missouri, first vice president; Dr. W. A. Sternberg, of Mt. Pleasant, second vice president; and Dr. E. B. Hoeven of Ottumwa, secretary and treasurer.

Four County Medical Society

A four county district medical meeting was held at Cherokee, Wednesday, June 15, with physicians

from Buena Vista, Ida, Cherokee and Plymouth counties in attendance. After the seven o'clock dinner at the Hotel Lewis, the following program was presented at the Country Club: Our Profession and Human Welfare, Paul E. Allen, M.D., Cherokee; Pneumonia—Symptomatology, Diagnosis and Treatment, C. L. Putnam, M.D., of Holstein; Observations on Post-Tonsillectomy Patients, M. J. Joynt, M.D., of Le Mars; and Spinal Anesthesia, H. J. Witte, M.D., of Marathon.

Iowa and Western Illinois Dermatological Association

At a recent meeting of the Iowa and Western Illinois Dermatological Association held in Iowa City, the following officers were elected: Dr. J. C. Kessler of Iowa City, president; Dr. A. T. Leipold of Moline, Illinois, vice president; and Dr. Robert E. Jameson of Davenport, secretary and treasurer.

Twin Lakes District Medical Meeting

The Tenth Annual Meeting of the Twin Lakes District Medical Society was held Thursday, June 16, at Twin Lakes near Rockwell City. A family picnic dinner was served at noon, after which the following program was given: Bureau Economics, R. G. Leland, M.D., of Chicago; Medicine, Russell M. Wilder, M.D., of the Mayo Clinic, Rochester; Surgery, O. H. Wangenstein, M.D., of Minneapolis; Neurology, Ralph Hammill, M.D., of Chicago; Allergy, Ray M. Balyeat, M.D., of Oklahoma City; and Obstetrics, R. D. Mussey, M.D., of the Mayo Clinic, Rochester. Officers for the coming year are: Dr. A. R. Anneberg of Carroll, president; and Dr. P. W. Van Metre of Rockwell City, secretary and treasurer.

Upper Des Moines Medical Society

The summer meeting of the Upper Des Moines District Medical Society was held Tuesday, June 21, at The Inn at Lake Okoboji, with the afternoon program consisting of a symposium on Arthritis, the essayists being Martin I. Olsen, M.D., of Des Moines, who spoke on the etiology and pathology; W. Eugene Wolcott, M.D., of Des Moines, who discussed various forms of treatment; and Daniel J. Glomset, M.D., who talked on Glomerulonephritis. D. W. Morehouse, president of Drake University, was the speaker of the evening at the dinner meeting, taking for his subject The Stars.

AUXILIARY NEWS**Polk County Auxiliary Elects New Officers**

The Woman's Auxiliary to the Polk County Medical Society held a picnic and annual election in Greenwood Park, Wednesday, June 15. Officers elected were: Mrs. Thomas A. Burcham, president; Mrs. Ralph Parker, vice president; Mrs. Rodney P. Fagan, secretary; and Mrs. James E. Dyson, treasurer.

South Carolina Auxiliary Aids Students

As a part of the auxiliary program of the South Carolina Woman's Auxiliary, an endowment fund

has been raised for the purpose of furthering students' loans. The program of this auxiliary follows that begun some time ago in other states, where the medical organization made loans to any needy student of medicine in their respective medical colleges, especially those in the junior and senior classes. The South Carolina Auxiliary will lend its funds to "physicians' sons and daughters who, through death or other misfortune, find themselves without adequate means of education." Physicians' sons more often than not, study medicine. At the same time there are, no doubt, physicians' sons who are denied the opportunity of studying medicine because they lack the academic work that must precede the medical course. The loan in this state will be limited to sons and daughters of those who are or who have been members of the South Carolina Medical Society.

The purpose of the South Carolina Auxiliary is to give the most effective aid at the most opportune time. Half of the loan will be given, if needed, at the beginning of college and may continue, if merited, until the boy is ready to practice his profession. The South Carolina Auxiliary will not, however, limit its aid to those who study medicine. The gifted boy, whose talents are quite outside the field of medicine; the ambitious girl who would like to fit herself for teaching but, not living in a college town, sees little hope of obtaining more than a high school education; any son or daughter of the profession threatened with the handicap of a lack of education in whatever line there is an evidence of marked talent, are all eligible to apply for the help of this student loan fund.

INTERESTING NEWS

In Brief

Fifteen per cent of the pupils enrolled in the Davenport city grade schools, or a total of 981, were found to have defective vision during the school year ending June 10, according to the annual report of Dr. P. H. Schroeder, director of child welfare. Glasses were procured in 306 cases. The report covered the results of 12,575 examinations of school children conducted during the year. A total of 1,602 children were found to be suffering from temporary tooth decay and 661 from permanent tooth decay; 158 had defective hearing; 1,627 were troubled with diseased tonsils and adenoids; 316 had irregular teeth and 81 were afflicted with defective speech.

Lester Tilton of Clinton, Iowa, and his two associates in a "cancer clinic," who treated patients with mysterious black salves, were convicted by a criminal court jury in Chicago, Illinois, on charges of conspiracy to violate the medical practice acts. "Dr." Tilton was sentenced to one to five years in jail and fined \$2,000. All three defendants were permitted to remain at liberty under bond pending motions for a new trial.

Recent researches conducted at McGill University indicate that nerves achieve their effects by means

of special hormones which they produce, instead of by direct action on muscles and glands. The investigators found that, under certain conditions, stimulating the nerve of the salivary gland on one side of the mouth produced increased activity and secretion by the salivary gland on the other side.

Dr. Bolivar J. Lloyd, medical director of the United States public health service, proposed that condemned criminals be used for experimentation with the new vaccine for yellow fever, and that if they survive, they be given full pardons. This idea is not new as it was a common practice in the fourteenth and fifteenth centuries to use condemned criminals as testers for poison antidotes.

The University of Pennsylvania has announced a bequest of \$2,500,000 for the erection of a hospital and an equal amount for the endowment of said hospital from the late Frederic S. Pepper, Jr. This hospital will become a part of the University of Pennsylvania Hospital and will provide for the free care and treatment of sick and injured persons.

Before a recent meeting of the American Psychiatric Association, Dr. J. Kasanin, of the Rhode Island State Hospital for Mental Diseases, discussed a new type of mental disease in which the outbreak is sudden and dramatic but in which the patient has a good chance for recovery. The disease has not been given a name, but resembles in some respects dementia praecox.

The will of Dr. John Edmund MacKenty, former senior surgeon of the Manhattan Eye, Ear, Nose and Throat Hospital, who died on December 11th, provides \$50,000 for a "MacKenty Fund," the income of which is to be used for educational propaganda on cancer of the larynx and to help defray expenses of charity patients operated on at the hospital for cancer.

Marshall county doctors will furnish medical assistance to the county poor at a blanket price of \$200 a month, according to T. E. Lockard, chairman of the board of county supervisors. This agreement was reached recently after a conference between officials of the county medical society and the supervisors.

Oswald T. Avery, of the Rockefeller Institute for Medical Research, is the recipient of the first prize, amounting to \$15,000, which was established by the American College of Physicians in memory of Dr. John Phillips, who lost his life in the Cleveland Clinic disaster in May, 1929.

A report made by Dr. Sidney V. Haas, of New York, before the recent meeting of the American Medical Association indicates that bananas are especially recommended as essential in the diet of celiac disease, since bananas contain a ferment which breaks up starches and converts sugar.

For the fifth consecutive year a new record was set at the University of Iowa, when 1,112 degrees and certificates were awarded June 6. Of interest to the medical profession is the fact that ninety-three new physicians will receive their degrees.

Drs. W. A. Sawyer, S. F. Kitchen and Wray Lloyd, of the Rockefeller Foundation, have recently reported the successful vaccination of sixteen persons against yellow fever. This is the first time scientists have found a way of giving immunity in this disease.

PERSONAL MENTION

Dr. Martin I. Olsen, of Des Moines, was re-elected secretary of the medical section of the American Life Association at the twenty-second annual meeting of the section, held in West Baden Springs, Indiana, June 7, 8, and 9. Dr. Olsen is vice president and medical director of the Central Life Assurance Society in Des Moines, Iowa.

Dr. Carter C. Hamilton of Durant, has disposed of his practice there, and is leaving for Boston where he will take two years of postgraduate study in roentgenology at Peter Bent Brigham Hospital. During his absence, his practice will be taken care of by Dr. Emil Muhs, a recent graduate of the University of Illinois College of Medicine.

Dr. Zella White Stewart of Iowa City, has just returned from a five months' tour of Europe and is reopening her sanitarium for allergic diseases.

Dr. Thomas Egan, who for the past year has been practicing at Varina, is now located in Spillville, a small town in southwestern Winneshiek county which has been without a physician for some time.

Dr. and Mrs. F. E. Burbank of Oxford, recently celebrated their fiftieth wedding anniversary. They were married in Iowa City, May 24, 1882, and have lived in Oxford for forty years.

Drs. John H. Peck of Des Moines and John C. Parsons of Creston, spoke before the Kiwanis Club in Clarinda, Tuesday, May 31. Dr. Peck spoke on "Tuberculosis Doesn't Just Happen," and Dr. Parsons on "The Patient's History in Heart Disease."

Dr. Arthur Steindler of Iowa City, was elected to the presidency of the American Orthopedic Association, when that organization met recently in annual session in Toronto, Canada.

Dr. G. D. Callahan, who has been practicing in Grinnell for the past few months, has moved his office equipment to Iowa City, where he will open up a private office.

Dr. Raymond S. Grossman of Marshalltown presented the address for the regular monthly luncheon

meeting of the Marshalltown Life Underwriter's Association, June 11, taking for his subject, "High Blood Pressure."

Dr. Leonard P. Ristine, who has been medical supervisor of athletics at the University of Iowa for the past three years, has been appointed superintendent of the state hospital for the insane at Cherokee, to fill out the unexpired term of the late Dr. George Donohoe. The term ends March, 1933, and Dr. Ristine will assume his new duties at once.

Dr. C. E. Chenoweth of Mason City, addressed the Presbyterian Ladies Aid on "The Qualifications of a Doctor," at the regular meeting held on Friday, June 3.

Dr. Clarence J. Berne, instructor in general surgery at the University of Iowa College of Medicine, has just received word of his appointment as assistant professor of surgery at the University of Southern California Medical School. Dr. Berne will be associated with Dr. Charles J. Rowan, formerly head of the department of surgery at Iowa.

MARRIAGES

Miss Marie M. Buettner of Burlington, and Dr. E. O. Muhs of Vermillion, South Dakota, were united in marriage June 15, at the home of the bride's parents in Burlington. Dr. and Mrs. Muhs will make their home in Durant, Iowa, where the former is beginning the practice of medicine.

The wedding of Miss Selma Prahm of Wyoming, and Dr. Earl H. DeShaw of Monticello, took place June 11, at the Presbyterian Church in Wyoming. The young couple plan a western honeymoon, and after July first will be at home in Monticello, where Dr. DeShaw has established himself in the practice of medicine.

Announcement has been made of the marriage of Mrs. Enid Joan Sprinkle of Kansas City, to Dr. W. B. Brock, for many years a practicing physician of Oakville. The ceremony occurred June 5, at Blue Springs, Missouri.

Saturday, June 4, the wedding of Miss Louise Ada Watson of Cedar Rapids, and Dr. R. Parker Noble of Norway, son of Dr. and Mrs. E. H. Noble of Clemons, took place at the home of the bride's parents. Dr. Noble was graduated from the University of Iowa College of Medicine and is now practicing medicine in Norway, where they will make their home after a short motor trip to Chicago.

DEATH NOTICES

Bufkin, Calvin W., of Runnells, aged sixty, was accidentally shot and killed while hunting, June 11. He was graduated in 1898 from Drake University

College of Medicine and had in the past been a member of the Polk County Medical Society.

Driver, Fred Joseph, of Macedonia, aged sixty-three, died Monday, June 6, in a hospital at Iowa City, following an automobile accident late Sunday night. He was graduated in 1895 from the University of Nebraska College of Medicine and at the time of his death was a member of the Pottawattamie County Medical Society.

Habenicht, Heinrich August, of Des Moines, aged sixty, died June 6, as the result of a serious heart condition which had existed for some time. He was graduated in 1899 from the University of Illinois College of Medicine and at the time of his death was a member of the Polk County Medical Society.

Rodgers, Edwin Clarence, of Wapello, aged sixty, died May 30, as the result of a self-inflicted gunshot wound. He was graduated in 1898 from the Keokuk Medical College and at the time of his death was a member of the Louisa County Medical Society.

Wilson, Carroll A., of Marble Rock, aged fifty-five, died June 3, in a Charles City hospital following a recent operation. He was graduated in 1901 from Keokuk Medical College of Physicians and Surgeons and at the time of his death was a member of the Floyd County Medical Society.

ACADEMY RECOMMENDS INVESTIGATION OF VETERANS' LEGISLATION

Congressional investigation of the whole plan of veterans' relief was demanded in a statement recently issued by the committee on public relations of the New York Academy of Medicine. Declaring that the elimination of subsidies to ex-soldiers who are not suffering from war disabilities would reduce federal expenditures more than \$450,000,000 a year, the committee made the following recommendations:

1. That hospitalization of veterans for nonservice-connected disabilities be discontinued.
2. That as hospital beds become vacant, the hospitals be sold to the states to be used as public institutions for persons with chronic ailments.
3. That inquiry be made as to adequacy of compensation to widows and dependents of soldiers who died or were killed in the World War or as a direct result of it.
4. That adequate compensation be continued for veterans who are actually diseased or disabled as a result of service.
5. That no compensation be paid for partial disability to those who are not in need or whose earning capacity is not materially impaired or who earn more than \$1,500 a year.
6. That medical opinion decide whether disabilities are caused or favored by military service and that the type of service be considered in arriving at decisions.

7. That the operation of the Emergency Officers Retirement Act be studied and revised to prevent existing abuses.

8. That in the formulation of future plans, Congress and the veterans' administration avail themselves of advice of medical organizations.

9. That civil service regulations that grant undue preference to ex-soldiers be rescinded because of the danger to the efficient conduct of the medical and public health services of the government.

The report pointed out, among other things, that a larger percentage of former medical officers are receiving pensions than other ex-officers, although some of them hold full time government positions.

AMERICAN BOARD OF OPHTHALMIC EXAMINATIONS

The American board for ophthalmic examinations will hold an examination in Montreal on Monday, September 19, 1932, at the time of the meeting of the American Academy of Ophthalmology and Otolaryngology. Necessary applications for this examination can be procured from the secretary, Dr. William H. Wilder, 122 South Michigan Boulevard, Chicago, and should be sent to him at least sixty days before the date of the examination.

ELEVENTH ANNUAL SESSION, AMERICAN CONGRESS OF PHYSICAL THERAPY

Announcement is made of the eleventh annual scientific session of the American Congress of Physical Therapy which, this year, will be held in New York City. The Hotel New Yorker, with its excellent convention facilities, will be the official headquarters. The convention will be conducted over the week from September 5th to 10th, but officially the scientific sessions will be run on September 6, 7, 8 and 9. On September 10, clinics will be given at more than fifteen New York hospitals.

The Congress meets in the east for the first time in its eleven years of existence. This is the result of numerous invitations which have come from eastern leaders engaged in the physical therapy science. From present indications this convention should attract the largest attendance in the history of the Congress. Preliminary programs may be secured by addressing the American Congress of Physical Therapy, 30 North Michigan Boulevard, Chicago.

PHYSICIAN AWARDED DECORATION OF THE PURPLE HEART

In 1782 George Washington instituted the Decoration of the Purple Heart as an award for meritorious acts of extraordinary fidelity or essential service. This award has recently been revived in connection with the 200th anniversary of Washington's birth, and by order of the President, the decoration has been conferred upon Dr. Rudolph H. Bloom, who served as a lieutenant-colonel in the United States army during the World War.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. McCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

Washington County Medical Society Organized Since 1873

NOTES FROM MINUTES OF EARLY MEETINGS

C. A. BOICE, M.D., Washington

In perusing the minute book of the Washington County Medical Society, which has been kept faithfully since 1873, many intensely interesting and very enlightening facts have been brought to light. It is well that some of these things be given a wider notice than has so far been accorded them, in order that some of our sturdy predecessors should have credit for estimable work done, belated as this honor may be.

Whether or not there was a county society in Washington prior to 1873, we have no records; but we are informed that at the meeting in May, 1873, a committee composed of Drs. D. Schofield, W. E. Fraser and W. F. Rodman was appointed to revise the Constitution and By-Laws. Schofield had come to Washington in 1869, Fraser in 1861, and Rodman in 1870. As Schofield appears, both by the record and by tradition, to have been a very active society man, we give him credit at least for either starting the society a few years earlier or rejuvenating the one already here.

The above named committee reported at the meeting of September 3, 1873. A very elaborate and all-inclusive Constitution and By-Laws was adopted under which the society functioned for thirty years, until the Iowa State Medical Society was reorganized and a model constitution for county societies adopted in 1903. The foregoing act of incorporation is filed on page 125 of Book 19 at the Recorder's Office.

After the Constitution had been adopted and signed by all the members present, the program meeting was held and matters of concern freely discussed. The question of collections received some attention. The opinion was expressed, and generally accepted, that all medical bills were due and payable within thirty days. We might add that all doctors since 1873 have held to the same opinion, but patients in general have not.

It was the usual custom after a paper had been read, to receive it and place it on file. Whatever became of that file we know not. Of course, it has long since been lost. Doubtless it disappeared with

the distribution of Schofield's effects after his death in 1893. How we should like to peruse many of the papers in that old collection! Some of the pages would be found very interesting as to personal experiences and ideas; many of them dealt with conditions, miasmatic, malarial, etc., of which we of a later generation have little knowledge and less experience; an occasional paper dealt with an epoch-making experience; all, distinct contributions to medical science.

As in retrospect, we listen to some of the authors, knowing some of them as we were privileged to do, we revere their memory, appreciate the pioneer work they did, and honor them for laying a good foundation and beginning the building thereon of a superstructure which has been a credit to the profession.

"They built the state more glorious than they thought,

Those simple rude carvers of an earlier time.
Though rude the tools, and few with which they wrought,

The passing years have made their work sublime."

On September 4, 1874, Dr. J. D. Miles of Crawfordsville reported a case of a boy of eight having a compound fracture of the tibia and fibula. The treatment was not amputation (which was the usual thing) but what was to be later called antiseptic, a then unheard of procedure, dressings moistened with carbolic acid. When the dressings were removed on the twenty-eighth day, healing was complete with no deformity. The doctor was given a vote of thanks. It was not until five years later, in 1879, that the teachings of Lord Lister were widely acknowledged.

A delegate was usually elected to represent the society at nearby county meetings, the state society meetings and the American Medical Association. On May 28, 1874, Schofield was asked for his report of the A. M. A. convention. He had to admit that he had no report to make for the very good reason that the A. M. A. had not as yet met since his appointment.

At this same meeting, Dr. Cushman reported a patient who had pneumonitis, with two-thirds of the right lung hepatized and a liver abscess as a complication. The liver abscess ruptured through the lung and the patient died. Some time later Dr. Cushman reported another case, giving case history, physical findings in detail, with diagnosis and promising a postmortem report at the succeeding meeting. At the next meeting, being reminded of his promise, he had to admit that he was unable to report on the postmortem for the very good reason that the patient had not died but had recovered. Cushman was somewhat of a wit and a good story teller. His son, as a congressman from the state of Washington, was to gain national fame years later as a story teller. About this time Fraser reported that he had lost faith in most of the remedies for diarrhea, but was still using ipecac and quinine.

A called meeting was held March 23, 1875, to discuss the advisability of organizing a district society. Schofield was instructed to issue a call to the physicians in the counties of Washington, Louisa, Muscatine, Jefferson and Keokuk to meet in Washington. Dr. J. H. Hull was admitted at this special meeting. At a meeting held May 26, 1875, further discussion was held. Drs. Wm. McClelland, A. B. McCandless, O. H. Prizer, J. D. Miles, W. E. Fraser, Darius Schofield, H. Cushman, R. H. Brice, F. B. McWilliams, Daniel McFarland and J. J. Rousseau were in attendance. The Eastern Iowa District Society was formally organized in Washington on June 28, 1875. Drs. J. H. Hull and H. M. Dean were present in addition to those above named. Later physicians in Lee, Des Moines and Henry counties were admitted. May 26, 1875, Cushman reported that there was no society organization in Jefferson county; Robertson reported likewise for Keokuk county. Meetings were held twice yearly, and the average per cent attendance was as high as it is now with roads and cars. It was the custom at each meeting to appoint essayists for the succeeding meeting. Just as now, this was a signal for some to be too busy to attend next time. A common subject was New Remedies. Much study and discussion was given this topic and we must admit that our predecessors knew their *materia medica* very well. In September, 1875, Dr. H. C. Hull of Crawfordsville attended a meeting, the only time his name appears in the records. Others in attendance were: Drs. J. C. Boice of Ainsworth, E. R. Jenkins of West Chester, Brockway of Paris, Hunter of Keota, Thos. Mealey of Pleasant Plaine, and Joseph A. Scroggs of Grandview. This was probably the meeting referred to by Schofield, at which Dr. Mealey reported that his obstetric practice had already reached 3,000 cases. There must have been a stork rookery over by Skunk River. Small wonder that the county population had reached 20,000 from 1836 to 1876. Later, Dr. J. A. Scroggs was to be Professor of Obstetrics at the Keokuk Medical College, and an excellent teacher he was. This seems to have been a most important meeting. The society went on record

as recommending a higher preliminary examination for students of medicine. Schofield was appointed to canvass the county doctors in the interests of a report to be made of health conditions to the Centennial Exposition Committee of the State Society, the same to be transmitted to the Philadelphia Exposition. Later we shall refer to this report. Schofield's report on New Remedies, which was a frequent cause for reports as late as 1905, was said to be fully abreast of the times and the author was thanked for his valuable paper. Robertson reported a twin birth with a single placenta. Cushman reported a case, arm presentation, impossible to turn and deliver. Consultation was held and while the consultants were consulting out in the yard, spontaneous delivery occurred. Such has always been the life of the doctor. At this meeting also Dr. J. R. Burroughs reported for the Committee on Prevailing Diseases and Epidemics, the summary taking in about one-half of the county.

Of miasmatic diseases there were 1,422 with no deaths; enteric diseases there were 91 with 35 deaths; diathetic diseases there were 133 with 3 deaths; tubercular diseases there were 97 with 14 deaths; diseases of the nervous system 164 with 15 deaths; diseases of the eye and ear there were 57 with no deaths; diseases of organs of circulation 45 with no deaths; diseases of organs of respiration 312 with 5 deaths; diseases of organs of digestion 446 with 5 deaths; diseases of genito-urinary organs 486 with 5 deaths; diseases of bones and joints 23 with no deaths; diseases of integumentary system 15 with 1 death; violent diseases and deaths 162.

Abstracts from the Centennial report by Schofield are as follows:

"Bottom and swampy lands, subject to periodical overflows, which have always been deemed a fertile cause of much sickness, especially in the fall, when bilious, remittent, intermittent and typhomalarial fevers frequently prevail. A persistent and strong malarial influence is to be met in about all the sickness yet occurring in this county."

"Brighton, in 1853 a village of 500, had 36 cases of cholera with 27 deaths. Dr. O. H. Prizer was the only doctor in the town who stood his ground and cared for the sick. The other doctors and the ministers 'went visiting' for the period of the epidemic."

"In 1863, an epidemic of puerperal fever occurred in Richmond. In 1864-5, diphtheria was prevalent. In 1873, a few scattered cases of cholera occurred. Much reliance was placed in patent medicines and home remedies. Every home had its infusions of tansy, dogwood bark, wild cherry, penny royal and smart weed tea (well named)."

"Any person possessing, or professing, competency, has been permitted to practice without let or hindrance. Nevertheless, the people had great faith and placed implicit reliance on those doctors who were able to prove their worth," for Schofield tells us "that rarely did any one go to the metropolitan centers for advice or surgery."

It was about this time that some disgruntled East-

erner became homesick for the fleshpots of Boston, and wrote this little poem:

"O, lonesome, windy, grassy place,
Where buffalo and snakes prevail;
The first with dreadful looking face,
The last with dreadful sounding tail.

"I'd rather live on camel hump
And be a Yankee Doodle beggar,
Than where I never see a stump
And shake to death with fever 'n' ager."

Stimulants were freely used, not only by the sick but by the supposedly well. It was current talk that a certain druggist bought a barrel of whiskey, and whenever a pint of whiskey was withdrawn, a pint of water was added, and that barrel never did run dry. McClelland told me that he prescribed a pint of whiskey for a boy ill with pneumonia; the father obtained it at this drug store, and by the time he reached home after a six-mile horseback ride on a winter day, the content of the bottle was solid ice.

In the forty years following 1836, the population of the county had reached 20,000; and the succeeding 56 years have not increased that figure. There were then 43 doctors, 33 by right of education and training being physicians, the other ten were just doctors. The surgery reported as having been done prior to 1876 included: strangulated hernia, four, breast amputations for cancer, eight, amputation of extremities, eleven, lithotomy (Clapp and J. J. Rousseau) one."

On May 31, 1876, Burroughs presented a case report on Hepatitis. The patient was present. The doctor delivered himself so well on the subject that a motion was made and carried to file the paper in the archives of the society. Nothing was said about it, but we presume that the patient was permitted to take his liver and go home.

A union meeting with the Keokuk County Society in Keota was held September 6, 1876. Dr. J. C. Boice of Ainsworth was admitted to membership at this time. Impassable roads kept Cushman, the main essayist, as well as several others, at home. Dr. Huff of Sigourney read a paper advocating "Simplicity in Treatment." He advised less medicine and more care in diagnosis. The record tells us that he received a severe scathing from the members of both societies. In the evening, Schofield gave, before a small audience, a very interesting address on "Mystery in Medicine."

At the meeting held May 30, 1877, the society was honored by the presence of Dr. J. C. Hughes, Professor of Surgery in the College of Physicians and Surgeons at Keokuk. Dr. Hughes discoursed most instructively on pseudomembranous croup and osteitis. An assessment of twenty-five cents each was made and Burroughs tells us that McClelland and eight others "shoved up the dust."

At the meeting of September 5, 1884, Dr. J. G. Henderson read a paper on "Animals in the Human

Stomach". How we would like to have heard the good doctor at this time; but we can rest assured that he described those conditions most graphically. Immediately after the reading of the paper, the society adjourned for dinner.

The first appearance of Dr. E. T. Wickham at the society was the meeting of December 20, 1888. He read a paper on "Gall-stones," the same being a case history. He forestalled all criticism of his diagnostic acumen by exhibiting the stones, removed at post-mortem. At the same meeting, Dr. J. H. Hull read a paper on "Veratrum Viridi."

On September 11, 1889, Dr. Lelia Latta read a paper on "Nervousness in Women." How she handled the subject or what recommendations as to treatment she made, we know not. Anyway, nothing would appear to have been done about the condition for it still persists. On May 7, 1891, Dr. W. H. McGaw reported a child with an imperforate anus with fistula into the bladder; also a case of spina bifida. At the meeting of September 1, 1896, Drs. George Hay and Charlie McLaughlin were able to get by the censors and were made members. That proved that they had been able to collect at least the one dollar. The first Board of Pension Examiners was appointed in 1886. The members were Drs. E. R. Jenkins, E. J. Meachem and J. C. Boice. On June 11, 1901, Dr. D. S. McConaughy told how to eliminate disease "by moral and physical development." It is doubtful if the members believed him, at least disease has not been eliminated.

November 11, 1901, Dr. C. A. Boice was admitted to membership. This was the last meeting to be attended by the aged Dr. McClelland. He talked most interestingly that day of his early experiences; of diagnosing smallpox by the smell, of the man who had sailed the seven seas and came home to drown in a horse tank full of water, of the great numbers of rattle snakes, of fording streams, of bleeding patients to syncope to obtain muscular relaxation in order to reduce fractures and dislocations, of the hysterical woman to whom he gave a dose of ether and asafetida and who, after recovery, told him "that was the damndest dose of medicine that ever went into a Christian," of his and Rousseau's experience with Fowler's solution, and of what happened when Rousseau cupped the old maid. The last meeting of the society to be attended by J. J. Rousseau was May, 1876; by Givan in 1881; Adair and Fraser in 1883, Cushman in 1885; Prizer in 1889; Schofield in 1892, and McClelland in 1901.

This subject is intriguing. How I should like to tell of McConaughy, of Hay the genial Irishman, of Frances Patrick White Lindsey, another Irishman; of M. C. Terry, the immaculate; of McGaw and his tobacco; of Meachem the singer, and many others, and make them live again. They all have finished their course, and as we remember their good qualities, we have most pleasant recollections; we minimize their failures and frailties, and sincerely trust that they, in the place to which they have gone, are enjoying a well earned and deserved reward.

OBITUARIES

Audley Emmet Nelson, M.D.
1868-1932

Doctor Audley Emmet Nelson, retired Sidney physician, was instantly killed Monday evening, June 13, when his car left the road and turned over three times. The accident occurred four miles north of Glenwood as the doctor, his wife and daughter were returning from Omaha. Mrs. Nelson and Rea, who were only slightly injured, were unable to explain the accident although it is generally felt that Dr. Nelson was stricken with apoplexy.

Doctor Nelson was graduated in 1897 from the Jefferson Medical College, Philadelphia, and had practiced in Iowa since that time, going first to Birmingham, his home town, until 1903, then to Ashton for two years, to Mystic for two years, and thence to Sidney, where he had been since 1907. During the World War, Doctor Nelson was active on both sides of the water, being stationed at Fort Riley, Kansas, for some time, after which he was transferred to Brest, France. Doctor Nelson was discharged from the army in 1919 with the rank of captain.

Heinrich A. Habenicht, M.D.
1872-1932

In this day of specialized practice less notice is given to the physician who continues to maintain an extensive general practice in the older sense. This is particularly true in the larger cities. Yet what close contacts he has with disease in all its various forms; what an intimate touch with the inner soul in times of anguish from grief and pain; and what a multitude he leaves to mourn at his bier when he passes on. Such a tribute we rightly accord to Doctor Heinrich A. Habenicht, who died at his home in Des Moines of organic heart disease on Thursday, June 9, 1932, at the age of sixty years.

He received his academic training at Union College, Lincoln, Nebraska, and was graduated in medicine from the American Missionary College of Chicago in 1899. After serving a year as an assistant in Battle Creek Sanatorium, Michigan, he located in Allerton, Iowa, practicing there until 1912, when he came to Des Moines, where he continued in active practice until a few weeks before his death.

When it is noted that before being confined to his bed with the last illness, he saw an average of thirty-five patients a day, some at the office and others located in different parts of the city, from all walks of life, an idea is gained of the time and energy required to complete the day's work. Again when it is recalled that during the entire period of a practice of thirty-three years, he served with the handicap of a double valve lesion, resulting from rheumatic heart disease, we recognize a type of courage and devotion to human service that ennobles our calling in the fullest sense.

His pleasing personality, sterling character, and unusual background of professional experience

gained for him the warmest regard of his colleagues and a host of friends. He was faithful to his medical society obligations and contributed freely from his experience to the programs of the Des Moines Academy of Medicine and Polk County Medical Society.

Doctor Habenicht deserves an honored place on the roll of Iowa physicians. As the family doctor of the new school, he brought cheer and comfort all along the way and will be keenly missed in the community that he served so well. W. L. B.

The following poem, written by Mrs. Beryl V. Thompson of Des Moines, is published as a tribute to Doctor Habenicht:

SURGEON

Knives are such cruel things,—yet in his hand
And with his skill, a benedictio
They were, and he a god with magic wand
Bidding the lame to walk—the blind to see.

And even as the Christ, so was he crucified
Unwittingly, by us he died to save—
No plea for succor left unsatisfied
Though made by rich or poor, by saint or knave.

"Better to wear than rust out" was his word,
And thus Death found him—loosed the silver cord.
South wind blow soft! Earth be you doubly blest
Who made for his tired hands a place to rest.

RESOLUTIONS

E. C. Rodgers, M.D.
1871-1932

Whereas, by death we have lost one of our most worthy physicians, E. C. Rodgers. Dr. Rodgers represented the true ideals of a worthy member of our medical fraternity. His life was typical of what becomes a friend, a physician, and a man. His life was one of service to his fellowmen, ethical and unselfish. We shall miss his kindly smile, his hand-clasp and his helpful interest, when the Louisa County Medical Society physicians meet each month.

Therefore, the Louisa County Medical Society, of which he was a leading member, regret his untimely death.

Be It Further Resolved, That these resolutions be spread upon the minutes of the society and a copy be sent to the Journal of the Iowa State Medical Society, the relatives, and the Wapello paper.

Dr. R. C. Ditto, President.

Dr. T. L. Eland, Vice President.

Dr. Roy W. Tandy, Secretary.

ADDITIONAL FUNDS FOR RESEARCH AT VANDERBILT UNIVERSITY

Two appropriations totaling \$300,000 have been made recently to Vanderbilt University for the benefit of the School of Medicine. Of this amount \$250,000 was granted by the Rockefeller Foundation as a fluid research fund for the School of Medicine with the understanding that a supplementary amount shall be secured by the authorities of the school. An appropriation of \$50,000 was made by the General Educational Board for a medical library.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***BIOCHEMISTRY IN INTERNAL MEDICINE**—By Max Trumper, Ph.D., Clinical Chemist and Toxicologist; and Abraham Cantarow, M.D., Instructor in Medicine, Jefferson Medical College; with a foreword by Elmer H. Funk, M.D.—454 pages with illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Price, \$5.50.
- FERTILITY AND STERILITY IN MARRIAGE**—Their Voluntary Promotion and Limitation.—By Th. H. Van de Velde, formerly Director of the Gynaecological Clinic at Haarlem, Holland.—Translation by F. W. Stella Browne.—448 pages, illustrated.—Covici, Friede, Inc., New York, 1931.—Price, \$7.50.
- ***GROWTH AND DEVELOPMENT OF THE CHILD—PART III—NUTRITION**.—A publication of The White House Conference.—532 pages.—The Century Company, New York and London, 1932.—Price, \$4.00.
- ***A HAND-BOOK OF OCULAR THERAPEUTICS**.—By Sanford R. Gifford, M.D., F.A.C.S., Professor of Ophthalmology, Northwestern University Medical School.—272 pages with 36 engravings.—Lea & Febiger, Philadelphia, 1932.—Price, \$3.25.
- ***MIDWIVES, CHIROPODISTS, AND OPTOMETRISTS**—Their Place in Medical Care.—By Louis S. Reed, Ph.D.—The University of Chicago Press, Chicago, 1932.—(Publications of the Committee on the Costs of Medical Care, No. 15.)—Price, \$1.00.
- NUTRITION SERVICE IN THE FIELD—CHILD HEALTH CENTERS: A SURVEY**.—A Publication of The White House Conference.—139 pages.—The Century Company, New York and London, 1932.—Price, \$2.00.
- OBSTETRIC EDUCATION**—Report of the Sub-committee on Obstetric Teaching and Education.—A Publication of The White House Conference.—302 pages.—The Century Company, New York and London, 1932.—Price, \$3.00.
- SURGERY WITH SPECIAL REFERENCE TO PODIATRY**—By Edward Adams, M.D., Professor of Surgery, the First Institute of Podiatry of New York.—International Journal of Surgery Co., New York, 1932.—Price, \$5.00.
- SURGERY OF THE CHEST**—By George F. Straub, M. D., F.A.C.S.—475 pages with 341 illustrations, including 68 color plates.—Charles C. Thomas, Publisher, 1932.—Price, \$10.50
- * Book Review in this issue.
- SURGICAL ERRORS AND SAFEGUARDS**—By Max Thorek, M.D., Surgeon-in-Chief, the American Hospital, Chicago, with a foreword by Arthur Dean Bevan, M.D., Professor of Surgery, Rush Medical College.—696 pages, with 668 illustrations.—J. B. Lippincott Company, Philadelphia, 1932.—Price, \$10.00.
- SURGICAL PATHOLOGY OF THE FEMALE GENERATIVE ORGANS**.—By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas.—346 pages with 285 illustrations.—J. B. Lippincott Company, Philadelphia, Montreal and London, 1932.—Price, \$5.00.
- ***A SPEECH FOR EVERY OCCASION**—By A. C. Edgerton, LL.M.—427 pages.—Noble and Noble, 76 Fifth Avenue, New York City, 1931.—Price, \$2.00.
- THE MEDICAL CLINICS OF NORTH AMERICA**—Mayo Clinic Number, May, 1932.—(Index Number)—Vol. XV, No. 6.—(Issued serially, one number every other month.)—239 pages, with 31 illustrations.—W. B. Saunders Company, Philadelphia and London.—Per clinic year, July, 1931, to May, 1932.—Price, paper \$12.00; cloth, \$16.00.
- THE STORY OF MEDICINE**—From Medicine Man to Modern Physician.—By Victor Robinson, M.D., Professor of History of Medicine, Temple University School of Medicine, Philadelphia.—Albert and Charles Boni, New York, 1931.—Price, \$5.00.
- A TEXT-BOOK OF CLINICAL NEUROLOGY**—By Israel S. Wechsler, M.D., Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, Neurological Institute and the Montefiore Hospital, New York City, Second Edition, Revised. 759 pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931.—Cloth, \$7.00 net.
- PULMONARY TUBERCULOSIS**—By Maurice Fishberg, M.D., Chief of the Tuberculosis Service, Montefiore hospital, and of its Country Sanatorium for Incipient Tuberculosis.—Fourth Edition, Revised.—Vol. I and II.—Illustrated.—Published by Lea & Febiger, Philadelphia, 1932.—Price, \$15.00 set, 2 Volumes.
- VARICOSE VEINS**—By H. O. McPheeters, M.D., F.A.C.S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital.—Illustrated with 62 half-tone and line engravings.—Philadelphia: F. A. Davis & Co., 1931.—Cloth, Third Edition. Price, \$3.00.

BOOK REVIEWS

BIOCHEMISTRY IN INTERNAL MEDICINE

By Max Trumper, Ph.D., Clinical Chemist and Toxicologist; and Abraham Cantarow, M.D., Instructor in Medicine, Jefferson Medical College; with a foreword by Elmer H. Funk, M.D. 454 pages with illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Price, \$5.50.

During the past two decades, many advances have been made in the practical application of laboratory investigations in the diagnosis, prognosis and treatment of disease. This attitude has been reflected in the many volumes which have been prepared dealing with the more recent investigations and discoveries in the field of biochemistry. The clinical value of biochemical data depends, first, upon the accuracy and skillful technic of the laboratory, and secondly, upon the rational clinical interpretation of the laboratory findings at the bedside. This volume has been prepared in full realization of these require-

ments. The authors have presented recognized and time-tested laboratory methods, stressing at the same time the practical application of these methods in clinical diagnosis. They have included only those tests which have proved of definite, practical value, and have correlated these findings with clinical problems. Chapter I deals with carbohydrate metabolism, while Chapter II presents protein metabolism, discussing the digestion and absorption of each and comparing the normal reactions to the abnormal responses noted in diseased conditions. Chapters III-VI, inclusive, deal with cholesterol, chlorid, calcium and phosphate metabolism. Chapter VII discusses the acid base balance. Respiratory exchange and basal metabolism are discussed in Chapter VIII, while diabetes mellitus is discussed in Chapter IX. Nephrosis, hepatic function, gastric function, pancreatic function, each are discussed in appropriate chapters, while the biologic changes in pregnancy and lactation are presented with their

blood and urine findings in a separate group. Examination of the cerebrospinal fluid, transudates and exudates, are discussed, as well as other types of urinary findings. No physician can feel that he is giving his patients the most recent, up-to-date and scientific treatment without the knowledge obtained from the newer studies in biochemistry. This volume is one of the best which has come to the reviewer's attention on this subject.

GROWTH AND DEVELOPMENT OF THE CHILD —PART III—NUTRITION

A publication of The White House Conference. 532 pages. The Century Company, New York and London, 1932. Price, \$4.00.

So significant is the relationship between nutrition and growth and development that the White House Conference on Child Health and Protection has made a special study of nutrition as a part of the contribution of the committee on growth and development, under the chairmanship of Dr. Kenneth D. Blackfan. This volume, which is Part III of the study, deals with nutrition covering a complete study of food substances and of the biochemical processes which utilize them. In presenting the subject the authors first outline their methods of approach to the problem and then discuss successively the requirements of the body regarding fats, carbohydrates, proteins, salt and vitamins indicating the pathologic states developed as a result of a diet deficient in any particular element. The data presented in the book is the result of both laboratory and clinical studies from practically every corner of the earth. To collect and summarize the voluminous literature on this subject is in itself a tremendous task. To properly appraise the material is even a greater achievement and one denoting the mature wisdom of the committee performing its task. There is here presented in one volume a most careful condensation of modern nutrition knowledge made available by scientific workers, with the added viewpoint that this information is linked to the growth and well-being of the child.

A HAND-BOOK OF OCULAR THERAPEUTICS

By Sanford R. Gifford, M.D., F.A.C.S.,

Professor of Ophthalmology, Northwestern University Medical School.—272 pages with 36 engravings.—Lea & Febiger, Philadelphia, 1932.—Price, \$3.25.

This hand-book of therapeutics merits only the highest commendation. Dedicated to the memory of his father, Harold Gifford, "To whose knowledge, judgment, and painstaking care of his patients, everything of value in this book is due," this book is a concise presentation of ocular therapy, written in a clear, fascinating style which makes it difficult for one to lay it aside. The material is so organized as to be instantly accessible and the work includes all of the most modern methods which the author himself has proved to be effective or which are

vouched for by ophthalmologists whose opinions are considered to be of undoubted value. It is so full of valuable information, that it should be included in the library of both the beginner and the veteran.—
R. R. S.

MIDWIVES, CHIROPODISTS, AND OPTOMETRISTS

Their Place in Medical Care. By Louis S. Reed, Ph.D. The University of Chicago Press, Chicago, 1932. (Publications of the Committee on the Costs of Medical Care, No. 15.) Price, \$1.00.

In the past midwives, chiropodists and optometrists have received relatively little attention in the general consideration of the problems of medical practice. The present publication discusses the status of these three types of practitioners in the country as a whole, supplying information relative to their income, and giving data on the number and distribution of these practitioners, their qualifications for rendering service in the limited field considered as their domain and the extent of their activities in the United States.

It is of particular interest to note that, at the present time, almost fifteen per cent of the confinements in this country are attended by midwives. Accepting this figure as correct, it certainly becomes a problem of no mean moment to determine the training of these midwives for the general protection of the public.

So long as medical practice continues on its present basis, midwives, chiropodists and optometrists can not be governed or controlled by the medical profession. It would seem fitting, however, that these special branches be included in some fashion in the general scheme of medical economics.

A SPEECH FOR EVERY OCCASION

A Speech for Every Occasion, by A. C. Edgerton, LL.M. 427 pages. Noble and Noble, 76 Fifth Avenue, New York City, 1931. Price, \$2.00.

It is not at all uncommon that physicians are requested to address not only professional but also lay organizations. While most physicians can readily prepare material for an address before a scientific body, it is frequently only with great inconvenience that such a talk is prepared for a lay audience.

This volume has been prepared for the help and guidance of individuals unaccustomed to preparing such addresses and presents short forms which may furnish the nucleus for a suitable address. On pages 179 to 181 a formal speech for a physician not prepared to discuss a scientific theme is presented. Elsewhere in the volume, are found forms for the use of a toastmaster or the response to a toast upon a wide range of popular subjects. The book will be found useful to any individual who is required to address a public audience.

The JOURNAL

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Iowa State Medical Society

VOL. XXII

DES MOINES, IOWA, AUGUST, 1932

No. 8

SURGICAL CLINICS*

DEAN LEWIS, M.D., Baltimore

FIRST DAY

I am greatly pleased to be able to meet with the Iowa State Medical Society this morning.

PERIPHERAL NERVE LESIONS

Some peripheral nerve injuries have been collected. The results of treatment of nerve injuries are not as good as they should be. The injury is frequently not recognized when received, and when recognized proper treatment is not instituted.

This patient was injured on the tenth of June, 1931. A scar may be seen upon the palmar surface of the forearm, low down, and upon the thumb. He also has another which probably followed an operation. A small nodule can be palpated just above the wrist. When pressure is made upon this, a tingling sensation is experienced over the distal portion of the median nerve. Atrophy of the muscles of the thenar eminence is marked, and when asked to oppose the thumb and index finger he is unable to do it. The fingers affected are tapering, shrunk, and show all the changes associated with a peripheral nerve lesion. When he attempts to flex the index finger he is unable to do so, but forces the index finger to the palm by the middle finger. He has lost use of the flexor muscle of the index finger, the long flexor of the thumb, the opponens pollicis, and the two radial lumbricales. A test of median nerve palsy can easily be made. The patient is asked to close the hand in the position of supplication. When an attempt is made to do this, the index finger of the affected side cannot be brought down on the back of the unaffected hand.

This patient has sustained a division of the median nerve. The nodule which can be palpated is a neuroma, which indicates a neurofibrillar block. Neurofibrillae probably will not pass distal to this neuroma, and if they did the nerve pattern would probably be so distorted that function would

be seriously interfered with, and until the neuroma is removed, a section of the nerve being carried back into healthy neurofibrillae and an end-to-end suture performed, there will be no possibility of improvement.

Nerve Pattern: In suturing peripheral nerves, the nerve pattern must be preserved. Stoffel and Langley and Hashimoto rendered a great service when they demonstrated that peripheral nerves have a distinct pattern and that corresponding funiculi in the proximal and distal segments must be contacted. The epineurium must be closed so that developing neurofibrillae cannot stray, and the ends of the epineurium may be approximated carefully. They should not be crushed together, neither should a space be left between the two ends in which blood may collect and a hematoma form.

Nerve Injuries Associated with Fractures: Nerve injuries associated with fractures form an interesting group. Deformities of peripheral nerve injuries are definite, such as wrist drop, loss of interosseous and lumbricales function in ulnar nerve palsies and of the lumbricales in median nerve palsy, and the drop foot of external popliteal palsy. Notwithstanding the typical clinical pictures, peripheral nerve injuries associated with fractures are often overlooked. This is due to the fact that a fracture is often regarded simply as a fracture, and injuries of peripheral nerves, blood vessels, and muscles are not looked for. The musculospiral nerve is most frequently injured in fractures. Over fifty per cent of the nerve injuries associated with fractures involve the musculospiral nerve. The nerve is rarely injured in fractures through the upper third. The nerve is most frequently injured in fractures through the radial groove and supracondylar fractures in which the upper end of the lower fragment is displaced outward.

There are two types of supracondylar fracture according to mechanism. The most common is the extension fracture in which the line of fracture extends from above and behind downward and forward. This is the fracture that is dressed in

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, May 4, 5, 6, 1932, Sioux City.

acute flexion. I have heard a number of reasons why such a fracture should be dressed in acute flexion. The only reason that appeals to me is that this fracture is an extension fracture, and in reducing a fracture, the mechanism should be reversed and the fracture dressed in the reversed position. In the flexion fracture, which forms about five per cent of the supracondylar fractures, the fracture should be reduced and dressed in extension. The line of fracture in such a case runs from above and in front downward and backward, and if dressed in acute flexion the displacement would be increased.

Late Ulnar Nerve Palsy: The ulnar nerve is next most frequently injured in fractures. One of the most interesting types of nerve injuries gives rise to the late ulnar nerve palsy. I have seen twenty-one or more of these cases. All have much the same history. Some years ago a student from the University of Wisconsin consulted me. He said that his left hand was wasting away. There was a distinct atrophy of the interosseous muscles and the typical deformity of ulnar nerve palsy in the ring and little finger. The proximal phalanges were somewhat hyperextended and the distal partially flexed. The lumbricales muscles flex the first phalanges and extend the last two. When these are paralyzed and the antagonists act, the first phalanx becomes hyperextended and the last two partially flexed. When his clothing was removed it was noted that there was a marked cubitus valgus on the left side. Going back in his history the patient remembered that when he was five or six years old he sustained an injury of the elbow. A doctor was called. The patient did not realize that anything was wrong until the wasting of the hand was noted.

This patient had sustained in childhood a fracture of the external condyle. Non-union had occurred, and cubitus valgus had developed. When the forearm was flexed the ulnar nerve was stretched over the prominent internal condyle. About one year ago I operated upon a man who had recently developed the symptoms of an ulnar nerve palsy. He was thirty-seven years old. While making a trip around the world he had developed an enthusiasm for deck tennis, and while playing this the atrophies and deformities of an ulnar nerve palsy developed. It was the same old story—injury of the elbow in childhood, fracture of the external condyle with non-union, and the development of cubitus valgus.

The ulnar nerve when exposed in these cases looks different. In some instances it is flattened, in others round, and firm, a long intraneural neuroma having apparently developed. The ulnar nerve should be transposed to the front of the

elbow in these cases and buried in an intermuscular system. When the nerve is transposed it is relaxed when the elbow is flexed, rather than stretched over an enlarged and prominent internal condyle.

Involvement of the sciatic and external popliteal nerve is not common in fractures. Occasionally one sees an external popliteal injury, resulting from the pressure of an improperly applied cast. A fracture which used to be seen in children but is uncommon now was separation of the lower epiphysis, a supracondylar fracture in which the lower fragment was displaced anteriorly. The external popliteal nerve was either divided or compressed by the sharp lower end of the upper fragment. The leg in this case had been caught in a revolving wheel. With the introduction of the automobile these fractures became less common.

Nerve Suture: If a diagnosis of division of a nerve can be made, an immediate operation should be performed. Many of the cases are seen late, however, and I have made it a rule to expose the nerve when paralysis is associated with a fracture if there is not definite improvement—and by improvement, I mean definite evidence of the return of motor function, for this is the only function upon which improvement should be based. In the majority of cases neurolysis should be performed. The nerve should be freed from scar or callus, the scar over the epineurium removed, and the nerve placed in a new non-bleeding bed. Careful hemostasis should be employed, for scar tissue will reform about the nerve when blood is present. The prognosis is good in a high percentage of these cases.

Ischemic Palsy: Ischemic palsy is a serious complication of fractures, for the deformity and disability is often so great that the hand is useless. Ischemic palsies are much too common. The early signs and symptoms are not recognized in most cases as early as they should be. It has been taught by many surgeons that ischemic palsy is due to a tight cast. Almost eighteen per cent of the cases, however, occur in patients when no cast or constrictive dressings are applied. Ischemic palsy occurs most frequently after fractures through the lower end of the humerus, supracondylar fractures, Colles' fracture, and Pott's fracture. The anatomic relations in the antecubital and popliteal fossae are much the same. The vessels of the extremity pass through fossae covered by a dense resistant fascia. The return of venous blood is prevented not infrequently by a subfascial hematoma, or ischemic venous lesion. In many of the cases in which ischemic palsy is threatened the antecubital fossa is tense and hard. Ischemic palsy when developing is accompanied by severe

pain. The hand becomes markedly swollen so that the fingers seem to project from a bag, the skin becomes mottled, and the fingers flexed and rigid. The symptoms of ischemic palsy are unmistakable. When a child has pain after the reduction of a supracondylar fracture, the doctor should be on guard. No attempt should be made to force the forearm into acute flexion, and no constricting dressing should be applied, for both procedures complete the vicious circle. In some instances the fracture may have to be reduced to prevent pressure by the upper end of the lower fragment, suspension of the arm with traction being employed to maintain reduction. In some instances in which the symptoms are progressive, incision of the antecubital fossa may be indicated to release the pressure caused by a hematoma.

The treatment of ischemic palsy is prophylactic. Once it has developed, the prognosis depends entirely upon how much of the contractile substance of the muscle has been substituted by scar tissue. If but little has been substituted, elastic traction is the treatment of choice. Passive motion should not be attempted unless carefully controlled. Forceful passive motion will rupture fibers, hemorrhage will occur within the muscle, and the last state will be worse than the first. In some instances it will be necessary to lower the origin of the flexor and pronator group of muscles. Such an operation is preferable to tenoplasty, transverse myotomy, or resection of bones of the forearm. If there is no contractile substance, no operation is of avail, for the function is lost. These changes cause ischemic palsy in the young because the vessels are elastic and healthy, permitting a collateral circulation. In an adult the same changes will in the majority of cases cause gangrene.

Prognosis of Peripheral Nerve Lesions: The prognosis of peripheral injuries depends a good deal upon the nerve involved. After a certain length of time, however, the prognosis becomes bad. Neurofibrillae are supposed to grow 2 mm. a day, but the prognosis varies with the nerve. The musculocutaneous nerve in the upper extremity, a nerve rarely divided, gives the best prognosis after suture. Next comes the musculospiral. In almost 90 per cent of the cases a good result should be obtained if early suture is resorted to. In many of the secondary sutures the outcome is better than one might expect. Even in the most successful cases, however, there may be no return of function of the abductor longus pollicis. The internal popliteal follows next in order as far as prognosis is concerned. Then the ulnar and the median. The nearer the suture to the wrist in each instance the poorer the prognosis. This is due apparently to the complicated nerve pattern at this

level. Stopford has made an interesting observation. He examined some soldiers with nerve injuries near the hand. There had been almost complete return of motor function in some of the cases, but these men had a marked disability because there had been no return of deep sensibility, and were disabled unless they could follow the movements by sight. After nine months the results of nerve suture become bad and the prognosis becomes worse as more time elapses between the division and the repair. Primary nerve suture should be performed whenever possible. If a primary suture should not have been made or it has been impossible to make one, a secondary suture should not be delayed too long, for the prognosis becomes worse as the suture is delayed.

Causalgia: Causalgia means a burning pain. It occurs most frequently after gunshot wounds of nerves, but is occasionally observed after other injuries. Causalgia follows injuries of the median nerve in the upper extremity and of the internal popliteal nerve in the lower. In some instances the nerve affected has apparently been merely grazed by the bullet and seems to be involved in a peripheral neuritis. This burning pain is frequently relieved by cold, and I have seen a victim of causalgia sit for considerable periods with his hand immersed in cold water. The hand when affected becomes shiny, the fingers taper, atrophy is marked, probably because of disuse, for every time movements are attempted there is a paroxysm of burning pain. Causalgia usually runs a course of a little over six months. The pain reaches its high point in about three months and then gradually subsides. A number of different operations have been performed for the relief of causalgia. I believe that injection of the nerve affected with 60 per cent alcohol above the site of the lesion gives the best result. The paralysis which follows such an injection lasts a little over three months and then disappears. During this time the pain is controlled and begins to subside. The injection of 60 per cent alcohol is most helpful in controlling the pain occurring in Buerger's disease. A large percentage of the amputations made in this disease are for the relief of pain. If pain can be controlled the gangrene may be limited and the amputation prevented. Injection of the nerves with 60 per cent alcohol has a very definite use in the control of pain in this type of vascular lesion. The paralysis is temporary, and the disability which follows the injection is not annoying.

SECOND DAY

The patients whom I wish to present this morning have bone lesions.

This patient is twenty-four years old. He went

to his physician on January 2, 1930, complaining of severe pain in the lower part of his back. This had come on two or three weeks before while he was lifting an oil barrel. The previous and family histories have no bearing upon his present illness.

BONE TUMORS

The patient is thin, but appears to be in good health. The general examination is negative. A beginning kyphosis is noted in the midlumbar spine. Marked tenderness is noted over the lower dorsal and lumbar spines. Muscle spasm is marked. An x-ray taken from the side reveals marked absorption of the second lumbar vertebra. The intervertebral disc is intact. The laboratory examinations are negative.

The patient was hospitalized January 2, 1930. A plaster body jacket was applied January 8, 1930, and the patient was discharged from the hospital wearing the cast. On April 7, 1931, an Albee operation was performed. A large graft was used which extended from the twelfth dorsal to the fourth lumbar vertebra. You have heard the history and seen the picture. I am unable to make a definite diagnosis.

I should like to say a word, however, upon giant cell tumors of the vertebrae. Some years ago I saw a young girl who rather suddenly developed a staggering gait and soon developed a paraplegia. An x-ray examination revealed a shadow in the fourth dorsal vertebra. When the laminae were removed at operation a vascular tumor containing spicules of bone was found. This surrounded the cord. Some of the tumor was removed by curette from the dura and radium placed over the remainder. This patient recovered completely. Some four years later I saw this child again. She had a kyphosis. She had become paralyzed again, but at this time the symptoms were entirely motor. A second operation was performed. There was no evidence of tumor. I thought that the cord was hung over a kyphosis. The patient was placed upon a Bradford frame for a short while and has completely recovered. Giant cell tumors of the vertebrae are benign. It is interesting to read of some cases in which the original diagnosis was a giant cell tumor and the diagnosis of the recurrence was bone cyst, which raises the much discussed question of the relation between giant cell tumors and fibrous osteitis.

Giant Cell Tumors and Fibrous Osteitis: Giant cell tumors are apt to occur in four places: in the lower end of the radius, the upper end of the humerus, the upper end of the tibia, and the lower end of the femur. The giant cell tumor occurs in the epiphysis, fibrous osteitis in the metaphysis. The enlargement of the bone is apt to be globular

in the giant cell tumor, fusiform in fibrous osteitis. The expansion of the bone is asymmetrical in the giant cell tumor, symmetrical in fibrous osteitis. In time the central giant cell tumor will break through the capsule, passing into or beneath the soft tissues. Non-union usually follows pathologic fracture occurring in giant cell tumor, while repair with union usually follows pathologic fracture through fibrous osteitis.

The next patient has a definite lesion in the ilium. I do not know whether or not you can see the lesion in the films from where you are sitting. This is a definite shadow in the ilium near the sacro-iliac joint; definite bony trabeculae run through this shadow, and the bone surrounding the shadow seems somewhat condensed. A diagnosis of giant cell tumor was made, but I would be inclined to regard this lesion as a localized fibrous osteitis.

Fibrous osteitis has an interesting history. In 1878 or 1879 Virchow described a bone cyst in the upper end of the right humerus. This contained hyaline cartilage, and Virchow thought that the cyst followed the liquefaction of an enchondroma, a tumor which is not uncommon in the upper end of the humerus. Later Von Recklinghausen described osteitis fibrosa cystica, a definite entity. Two forms are recognized, the single and multiple, which apparently have different etiology. The single lesion is thought by some to be a healing stage of a giant cell tumor. The multiple lesions have in many instances a definite relation to increased parathyroid activity. Ballin during the past few years has especially emphasized this relationship, and has seen cases go on to repair after the removal of a parathyroid adenoma.

The next patient exhibits an entirely different type of bone lesion. An amputation has been done. I should say, judging from the x-ray appearance of this lesion, that the patient had an osteolytic sarcoma of the femur. A destruction of the joint such as occurs in tabes can be excluded. In some cases it is difficult to make a diagnosis even when all the diagnostic aids are employed. I insist, therefore, upon a satisfactory biopsy whenever a mutilating operation is to be undertaken. To show the difficulties I will cite a case reported from one of the best surgical clinics in Germany. The boy, seven years of age, had a swelling of the thigh. A diagnosis of a sarcoma was made, tissue removed, and the pathologist, one of the best, made a diagnosis of a small round cell sarcoma. The child was so ill that it was not thought advisable to attempt a disarticulation at the hip. He was sent home, and returned a year later in good health. Some small sequestra were

all that remained of the non-suppurative osteomyelitis which the child had. Chronic sclerosing non-suppurative osteomyelitis gives rise to the greatest difficulties in differential diagnosis.

Secondary Tumors of Bone: Care must be exercised in recognizing secondary tumors. A careful physical examination should be made in all cases. I have recently performed a shoulder disarticulation for a pathologic fracture of the humerus, in which a careful search for the primary tumor has been made and none found. The most common tumors forming bone metastases are carcinomas of the breast, thyroid, and prostate and hypernephromas.

Myositis Ossificans: Myositis ossificans offers some difficulties in diagnosis at times. Myositis ossificans is noted most frequently in the brachialis anticus and the vastus externus. That occurring in the brachialis anticus most frequently follows posterior dislocation of both bones of the forearm. It occurs after dislocations which have been promptly and correctly reduced. Myositis ossificans also occurs in the vastus externus during the football season. The history is quite typical, and the dotted-veil appearance of the shadow, parallel instead of at right angles to the shaft, is so characteristic that there should be little difficulty in making a definite diagnosis. Occasionally a tumor is encountered in which the diagnosis of myositis ossificans is made. I have seen such a tumor involving the upper end of the humerus, the entire deltoid being ossified, in which a diagnosis of myositis was made from tissue removed at biopsy. Later the patient died of a bone-forming metastatic tumor of the pleura and the gland of the neck. I believe that this was a malignant tumor from the beginning because of its progressive character, although some think that the malignant changes occurred in a myositis ossificans.

Carcinoma of the Stomach: This patient had had a resection of the stomach for carcinoma. Only 20 per cent of the carcinomas of the stomach which enter the hospital can be resected. They come too late for several reasons. The course of carcinoma of the stomach is not infrequently insidious and the lesion is non-resectable before the patient realizes the gravity of the disease. In some cases the patient experiences gastric distress much like that he had before, from which he has been relieved by medicine (patent or otherwise). He again delays. In some instances, however, the physician is to blame because he does not make a thorough examination. The so-called dyspepsia should arouse suspicion and the patient should not be dismissed until the examining physician or surgeon is convinced that there is no malignant lesion. Eternal vigilance should be the watchword. The

prognosis of carcinoma of the stomach will not be improved until patients come so early that the number of resectable cases are greatly increased in number.

SIGNIFICANT LABORATORY TESTS FOR THE GENERAL PRACTITIONER*

MARY H. SWAN, M.D., Chicago

In many conditions, the welfare of the patient and, indeed, the protection of the community from invasion of disease, depends upon early and accurate diagnosis. The laboratory should be regarded as a first aid in the physician's armamentarium, for through it is demonstrated the part of the patient's symptoms which may show in the blood, the excretions, the stomach contents or the tissue. Because the analysis of this part of the patient's symptoms requires special training and equipment of precision, the term laboratory tests is applied to it. It is the responsibility of the general practitioner to assemble and correlate *all* the symptoms of his patient for the registry of clinical evidence; not only those of his own observation, but those which may come through laboratory channels and, in special cases, those of a consultant's observation. Since the general practitioner has the opportunity of seeing the complete clinical picture, the final diagnosis must rest with him.

I would direct your attention to the volume and importance of information that one may gain from examination of the blood. I need not tell you that it is often the high leukocyte count that helps the surgeon to decide to operate for appendicitis, that through the practice of having routine blood counts and hemoglobin estimation on all patients, physicians have many times learned of conditions which surprised them, and have thereby been able to greatly aid their patients. You undoubtedly know the value of examination of the blood smear in myelogenous leukemia for the myelocyte and myeloblast; in lymphatic leukemia for the enormous number of mononuclears; in pernicious anemia for great irregularity in the shape and size of red cells; in lead poisoning for the large number of stippled red cells; in malaria for the malarial parasite, and I need not further emphasize this phase.

Much has been done for pernicious anemia in recent years in the way of diet management. The reticulated red cell increases in the blood stream if the patient is being benefited, and the count of these cells furnishes a check on the patient's status. The increase of reticulated red cells indicates an active bone marrow and a regenerative process. The same is true of an increased platelet count in

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the blood, on the theory that the platelets are pinched-off parts of giant cells of bone marrow. After a severe hemorrhage they become increased if the bone marrow is in a healthy condition and equal to repairing the loss of blood. In aplastic anemia, the platelets are practically absent. When the bone marrow is overactive, as in myelogenous leukemia, the platelets appear in great abundance.

In the blood chemistry field, the van den Bergh test for estimating the amount of bilirubin in the serum of the patient has found favor with clinicians because accurate serum bilirubin estimation may disclose latent jaundice and may also show the intensity and trend of jaundice in a way that cannot be done by looking at the sclera, the skin, or by testing the urine. Differentiation may be made between the obstructive and the hemolytic types by a time element in the test, the prompt direct action indicating the obstructive type and the delayed direct reaction the hemolytic type. There are, of course, doubtful readings in some patients. The test also has value in distinguishing between pernicious and secondary anemia, the serum bilirubin being low in the latter case.

Blood calcium may become very low in tetany in the child and in parathyroid conditions. The injection of parathyroid extract restores the blood calcium to normal when it has been greatly reduced following parathyroidectomy. In retention acidosis of terminal nephritis the blood calcium finding may become as low as it does in tetany in the child.

In connection with acidosis, the carbon dioxide determination on blood plasma is of value in grading the severity of the attack; in determining whether it is mild, moderately severe or extreme.

It has been said that by means of blood chemistry we "pass behind the barrier of the kidney." Unsuspected cases of nephritis are not infrequently detected by selected chemical analyses of the blood. The group of tests for non-protein nitrogen, urea nitrogen, creatinin, uric acid and chlorids belong together. Late interstitial nephritis is characterized by high non-protein and urea nitrogen, by high uric acid and by high creatinin content, while in the earlier stages of the disease, the same substances are only moderately increased. Blood chlorid estimation is of particular value in the more strictly parenchymatous type of nephritis, the chlorids being greatly increased and little nitrogen retention being evident. In acute nephritis there may be acidosis without nitrogen retention. The nitrogen and the chlorid determination is of use in following response to diet regimens. Because the kidney most easily excretes creatinin, the creatinin content of the blood is a guide to the status of renal function in

interstitial nephritis. A reading above 4 indicates great impairment of function and a finding above 5 usually means a fatal outcome in six months' time. Exception to this ruling is in acute nephritis and mild mercury bichlorid poisoning, when creatinin may become very greatly increased. The uric acid is the most difficult substance for the kidney to excrete. The finding of occasional casts and a trace of albumin in the urine, accompanied by an increased uric acid content of the blood, tends to signify an organic kidney lesion. A uric acid increase without nitrogen retention indicates gout, and such a finding is an aid in differentiating between rheumatic fever and other arthritides. Cholesterol estimation in the blood is useful in establishing the diagnosis of lipid nephrosis.

Testing the urine for sugar is not a safe guide for the diagnosis of diabetes mellitus for the reason that the kidney threshold is usually greatly raised in diabetes. There is also a glycosuria of about 1 per cent or less, unaccompanied by increased sugar in the blood, and unaffected by carbohydrate intake, which is not of pancreatic origin and is harmless. This phenomenon is called renal diabetes. It is imperative that all diabetic suspects have a blood sugar analysis. In hyperendocrinism it is not unusual to find increase in blood sugar. If there is not actual increase there is usually a decreased sugar tolerance, so that a sugar tolerance test should be performed. In hypo-endocrine disturbances, such as hypopituitarism, hypothyroidism, or Addison's disease, there is often decidedly increased sugar tolerance.

The blood culture is of particular value in making an early diagnosis in typhoid fever. The blood culture should also be made in endocarditis cases for determining the presence of the streptococcus viridans, and is of value in other fevers as well.

The mention of the word serology brings first to mind the Wassermann test for syphilis. The clinician treating syphilis and the laboratory worker, who have the opportunity to observe the syphilitic patient in every phase, are agreed that early diagnosis cannot be too forcefully emphasized. It is thought that if treatment is begun on the patient with a primary lesion before the Wassermann test becomes positive and before the appearance of secondary lesions, the chance for cure is 100 per cent if the patient gives cooperation and the treatment is adequate in the kind and duration of medication. If, however, treatment is delayed until the Wassermann test is positive, or until secondary lesions appear, cure is less assured. Dr. J. Earle Moore, from his work in the Johns Hopkins syphilis clinic, is of the opinion that under the very best possible treatment cure may occur in 80 per cent of patients. This means

that a few days' delay in starting arsphenamin injections may make the difference between an ultimate cure and no cure. The dark field illumination becomes an urgent necessity in the light of facts. There should be at least one physician in every community qualified to make a dark field examination for the *Treponema pallidum*. Hazen says that every genital abrasion or sore should be suspected as syphilitic until proved otherwise. Stokes says, "There is no way to identify a genital lesion except by the dark field illumination and the Wassermann test. Without the dark field there is a margin of error of 30 per cent in the primary diagnosis of syphilis." It is thought that the Wassermann test may be positive the second week in 70 per cent of cases. Extra-genital sores which do not heal promptly, especially the lingering sore on the lip, should be viewed with suspicion and should receive the same decision of action that the physician would give to a case of suspected smallpox.

The precipitation tests have come to be used routinely along with the Wassermann test, the two types of tests supplementing each other. The Wassermann test should always be done as well as the dark field, for a lesion is often older than the patient indicates. Workers with syphilis insist that the complete spinal fluid examination is absolutely essential in every early case of syphilis. In outlining medication it is of importance to know whether the nervous system is involved. It is recommended that the first spinal puncture be made after six months of treatment and if the fluid is found negative a second puncture is indicated at the end of two years as a second check.

Complement fixation tests are exceedingly valuable in diseases other than syphilis. The test is of high specificity in the presence of echinococcus cysts in the body. In typhoid fever it should be given a larger place. Kolmer is of the opinion that it is especially useful as an aid in establishing the early diagnosis of typhoid fever, as the complement fixation is likely to be positive before the Widal reaction. The test is also of value in the vaccinated individual who develops typhoid. The complement fixation and the agglutination tests supplement each other in undulant fever and tularemia, just as the complement fixation and the Widal tests supplement each other in typhoid. It is probable that cases of undulant fever have, in the past, been diagnosed as typhoid or tuberculosis. With the increase of undulant fever in the United States, physicians need to exclude it in doubtful fevers.

Important blood tests are available to the physician at a distance from a laboratory because material can be sent very well through the mail.

The value of blood grouping for blood transfusion is well recognized and employed.

I do not need to dwell on the routine examination of the urine, for doctors very generally do have the more important analyses done. I do wish to remind you that in a patient who may have a tuberculous kidney, the guinea pig inoculation with urine from each kidney is a useful procedure.

A urine test of outstanding value has recently been developed, the Aschheim-Zondek test for pregnancy. The young female rabbit is injected with a morning specimen of urine three times in twenty-four hours. There are those who make only one injection. After forty-eight hours the rabbit is killed. If the patient is pregnant, the urine will carry a hormone which causes a corpora hemorrhagicum in the ovary of the rabbit. The test is more than 95 per cent accurate. In our laboratory no false positives have been obtained and in a number of instances, when the routine procedure gave negative results in pregnant patients, the injection of a larger quantity of urine gave positive findings in a second test. One may get a positive Aschheim test as early as three weeks. This test is of the greatest import to the physician who is confronted with the necessity of differentiating between pregnancy and a fibroid condition. There have come to my notice quite recently two instances of operation for supposed fibroids. On operation both patients were found to be pregnant. At present both patients are apparently going to normal term. In one of these, an x-ray picture was taken for the purpose of ruling out pregnancy and it failed to show the condition. An Aschheim-Zondek test on these patients would have saved the patient from expense and discomfort and the surgeon from some embarrassment.

Because of the need for early diagnosis of either ulcer or cancer of the stomach if the patient is to have a favorable outcome, repeated gastric analyses should be carried out in the suspicious case. Since variable and sometimes misleading results are obtained from the test meal, it is essential that the laboratory examinations be supplemented by x-ray pictures. It is one of the most difficult problems in medicine to get satisfactory findings on early malignancy of the stomach. In dealing with stomach disturbances one must not forget that syphilis may frequently be a predisposing factor. For this reason the Wassermann test needs to be done routinely on patients with stomach irregularities.

In considering the possibility of malignancy or ulcer in the gastro-intestinal tract, the feces should be examined for blood, both chemically and microscopically. If the blood comes from high in the

tract, there will be a positive chemical test but no red cells will be found. If the blood comes from lower in the tract, red cells will be found and the chemical test for blood will also be positive. Unusual diarrhea or dysentery calls for not only culture but also careful microscopic examination for the *entameba histolytica*. In the south one of the most important procedures is the examination of the feces for animal parasites or their eggs. The tapeworm finding is probably the most common occurrence of the animal parasite group in this latitude. A high eosinophil count in the blood requires a search for parasites in the feces.

The basal metabolism determination is being used with greater frequency by clinicians because of the valuable aid it gives in the thyroid patient. It is also useful in the depressed patient. It is of interest to note that in these times of financial stress the metabolic rate tends to be below normal in an increasing number of patients.

Allergy has received a vast amount of study and attention of recent years and it has become a specialty in itself. The asthma patient, the annual hay-fever patient and a large group of persons who are affected by certain foods, show allergic reactions. The offending cause in these persons can often be traced accurately through a large series of preparations that are available for testing the specific idiosyncrasy of a given patient. The asthma or hay-fever individuals can often be helped by the preparation of the offending allergen if they are unable to go to a climate adapted to their needs.

The average individual is gradually adopting the idea of occasional physical examinations for the purpose of keeping well. To the urinalysis, the blood count, the Wassermann test, should be added the electrocardiogram as a routine procedure. The electrocardiogram shows abnormalities of rhythm and rate of the heart that are not detected by ordinary examination.

The tissue examination has been left until the last because of its importance. It has been said that the microscopic examination of tissue is an art; that many study the science of pathology but few become masters of the art. Only years of constant work can give the necessary experience and judgment. The opinion of a long experienced pathologist is paramount in making tissue diagnosis. Tissue, placed in a little 10 per cent formalin, is one of the very easiest laboratory materials to send through the mail. The use of the mail makes skilled opinion in tissue work available to all physicians. Biopsy or the rapid-frozen section is particularly useful in abdominal and breast operations when it is advisable to do all at one operation, but many times sufficient tissue can

be removed for diagnostic purposes and further operation can be carried out in a second stage. It is often to the patient's advantage that a pathologist be given a fair amount of time for studying more than one section if his happens to be a borderline case. If a clinician consults a pathologist by mail he should remember that to get the best service he needs to send the salient features of the history with the tissue and a statement as to the region from which the tissue was taken.

One of the best ways for physicians to keep their diagnostic ability in form is by checking their diagnosis by the facts of the autopsy. Sometimes one may not be flattered by what is found, but it is by such straightforward checks that the physician remains clear-sighted and improves medical practice.

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Discussion

Howard L. Van Winkle, M.D., Cedar Rapids: I think this subject is a very good one, because, like that of the medical or surgical treatment of gastric ulcer, we are bound to bring forth an argument.

If I may be allowed to enlarge the subject a little, that is, the subject of the relation of the practitioner to the laboratory, without committing myself as an adherent to the laboratory school or the clinical school solely, I would say that we must admit that the facts which have been derived from the laboratory have tended to lift the procedure of medicine from the art to the science of the practice of medicine.

I think that one criterion which we must demand in our laboratory is a well trained personnel. Not only must they be well trained and conversant with the various tests which are known, but they must also be absolutely honest. A laboratory test which is poorly done might better not be done at all.

These laboratory procedures may work both ways. After we have taken a careful history and have, in our minds, decided that when a physical examination is made, certain things should be found, we should also feel that certain results must be found in our laboratory examination. If these results are not forthcoming and your laboratory is one upon which you can absolutely depend, it would be well for you to look further into your diagnosis. I recently had an instance of this. I had a case which I felt was a cholecystitis and made a Graham-Cole test which demonstrated a functioning gall-bladder. However, the clinical signs, to my mind, were so definite that I had another Graham-Cole examination made which showed a non-functioning gall-bladder. The gall-bladder was later removed and by pathological examination demonstrated the presence of inflammatory processes.

By using a careful classification of the immature forms and using Schilling's shift to the left or shift to the right, we have been able to make more definite diagnosis and also have been able to give a better

prognosis, that is, a more accurate prognosis from the information thus given in the ordinary blood smear.

I am glad that the essayist mentioned the test for pregnancy, which seems to be quite definite and one which may be made early. It is unnecessary for me to try to explain to this audience the perfectly obvious value such a test can be.

Another point that I am glad the essayist made is the biopsy. I can see no reason why a surgeon should be at all hesitant in removing a sufficient amount of tissue for a very careful examination if he is confronted with a borderline lesion. There can be no fear of spreading the malignancy, if it turns out to be a malignancy, even by waiting two or three weeks. I feel that if there is a borderline condition, you should take out a sufficient amount of tissue and have it carefully examined rather than to keep the patient on the table waiting for a hasty frozen section examination. If the pathologist feels that he would like to have more time, give him the time.

We have had today some discussions upon the kidney conditions. There is one condition where a simple laboratory test is of great assistance. I refer to the prostate cases in which we have considerable distress from retention bodies. By following the blood creatinin curve, the laboratory can tell the surgeon the most opportune time to operate and can also tell him in some cases that even though he should operate the prognosis is going to be bad or fatal.

Mary H. Swan, M.D., closing: I am very glad that Dr. Van Winkle brought out the value of the Schilling count, because the Schilling differential count is of special value in acute infections where the total white count is not high and the presence and number of immature forms, including "staff" and "juvenile" cells are of value in prognosis.

DIFFUSE GLOMERULONEPHRITIS*

J. L. KESTEL, M.D., Waterloo

The old classification of parenchymatous nephritis, and its different forms and pathologic variations, has been largely replaced by the single term "glomerulonephritis." The term interstitial nephritis is no longer used; it is recognized that the interstitial fibrous tissue is only a replacement of destroyed glomeruli and tubules. The classification "nephrosis" is limited to a comparatively rare clinical and pathologic picture—it is considered to be primarily a disease of the tubules. Lipoid nephrosis has a definite clinical picture, characteristic of which are normal blood pressure, profuse albuminuria, and marked edema; and no tendency toward protein end-product retention, but an abnormal increase in blood fats and diminution in serum protein. Many of the cases classified as

nephrosis a few years ago, however, later developed typical symptoms of glomerulonephritis. (Even in relatively typical glomerulonephritis with edema, increased blood lipoids and diminished serum protein not infrequently occur.) The classification of nephrosis usually includes another small group, as mercury poisoning and amyloid degeneration; in which tubule pathology and edema are prominent.

In general, however, the term glomerulonephritis covers the greater part of the field of diffuse degenerating diseases of the kidney, except the arteriosclerotic kidney changes that occur with general arteriosclerosis. It is occasionally rather difficult to differentiate between chronic glomerulonephritis and arteriosclerotic kidney disease. The relatively higher blood pressure in arteriosclerosis, the general condition of the arteries and particularly those observed on fundus examination, the absence of history of edema, and occurrence relatively later in life; all or separately argue in favor of renal arteriosclerosis. Practically, a differential diagnosis has little value.

Clinically, cases of diffuse glomerulonephritis are not all alike, but there is considerable general similarity. The acute or initial stage comes on abruptly after exposure to wet or cold; but after an infection like scarlet fever, there is a delay before symptoms develop. The onset varies considerably. Some cases begin with a chill, fever and hematuria. Occasionally a convulsion is the first indication of the disease. Often edema is the first symptom, and this early stage is sometimes referred to as the edema period. It may be slight and transient; or profuse and of long duration. There is little tendency toward nitrogen retention, and a fairly concentrated urine can still be passed, but the ability to excrete salt is diminished. The convulsions are due to cerebral edema, unlike those of late nephritis. If there is nitrogen retention during this period, the outlook is immediately grave. The urine contains albumin, casts and sometimes blood and is generally diminished in amount. The outstanding finding is elevation in blood pressure, and this definitely establishes the diagnosis and differentiates it from lipoid nephrosis. It may be only 140 to 150, and is rarely above 190. Slight anemia usually exists, but not to the degree that the pallor would indicate.

Many patients unquestionably recover after this stage; at least sufficiently so that no permanent kidney disability can be detected. We are all familiar with the favorable outlook of acute nephritis following scarlet fever. If recovery does not occur, a more quiescent and chronic stage follows. Sometimes the blood pressure remains elevated, but more often it has a tendency to return almost

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to normal. The edema tends to subside. Not infrequently, the urine will be devoid of albumin, and it might be almost impossible to determine whether recovery has taken place. On repeated examinations, however, albumin will generally be found, and functional tests will almost always show slight impairment of excretory powers. The impairment seems to progress and the tendency toward nitrogen retention gradually increases. Sooner or later, after either months or years, marked nitrogen retention with resultant symptoms and uremia develop.

Perhaps the best test and probably the simplest one to determine whether permanent kidney damage has occurred is the concentration test. A relatively fixed specific gravity indicates the loss of flexibility of the kidney, and indirectly, is a fairly accurate estimate of the relative proportion of functioning glomeruli. If the gravity does not rise about 1.016 or 1.018 on dehydration, impairment is quite marked, and suggests renal insufficiency. If it rises above 1.030, the kidney function is considered within normal limits. It is true that there must be considerable damage before the flexibility is greatly impaired, but if the loss of function is no greater than that, it can be disregarded from a practical standpoint.

The blood urea and blood creatinin will not be found elevated in a normally flexible kidney, unless the individual is dehydrated or has an upper abdominal obstruction. In renal insufficiency, however, the blood urea is the most practical test to determine how much of the nitrogenous waste products of protein metabolism are being retained because of the patient's inability to pass either sufficient urine or sufficiently concentrated urine. The blood creatinin is not so apt to fluctuate with protein intake and withholding or forcing fluids. The phenolsulphonephthalein test is a fairly reliable guide of kidney function but often varies, even in the same individual, on repetition, and is occasionally influenced by liver changes. McLean's test, which consists of oral administration of urea and observing how rapidly it is excreted, has considerable value; as well as Van Slyke's index of urea excretion. Both these tests will parallel the concentration test very closely, and rarely give further positive indications of slightly diminished renal function.

Secondary anemia occurs with renal insufficiency, and its degree depends upon the amount of nitrogenous end-products of protein metabolism (chiefly urea) retained.

The streptococcus has generally been considered as an etiologic factor in nephritis, but even from clinical observation, it hardly seems to produce all cases. Experimental studies have failed to

produce uniform results. Some workers were able to produce glomerular changes in animals with different types of streptococci or their toxins, but others have been unable to do so. Recently Dr. Helmholtz has again found fairly characteristic glomerular changes in the rabbit following the injection of streptococcus viridans. Rabbits' kidneys, however, frequently are the seat of spontaneous degeneration; and any toxic substance might produce nephritis. Blackman, Brown and Rake, of Johns Hopkins, have reported the production of acute nephritis by means of a pneumococcal autolysate.

There is still lack of accord between the pathologic findings in the kidneys and the clinical symptoms. In a general way, however, the glomeruli are affected in a fairly uniform manner during the acute stage. There is swelling of the capillary tufts, the blood flow is diminished, proliferation of the epithelium covering the capillary tufts and of the epithelium of Bowman's capsule occurs. The glomeruli become devoid of blood, or the blood flow through them is greatly diminished. Secondly, degeneration and inflammatory changes extend down the proximal ends of the tubules, because of interference with the blood supply, which is derived in part from the glomerular supply. Lymphocytes and sometimes leukocytes infiltrate about the degenerating glomeruli and tubules. After a period, these changes either recede or progress. If they progress, many of the glomeruli are completely obliterated and converted into hyalin bodies or fibrous tissue. Sometimes part of the capillary loop remains. In others there is more proliferation of capsular epithelium. Along with these, there will be normal and hypertrophied glomeruli. Many of the tubules belonging to obliterated glomeruli are completely replaced by fibrous tissue. The smaller arteries throughout the kidney show considerable change; the caliber is diminished by degeneration and proliferation of the intima. Eventually more glomeruli become completely destroyed and hyalinized, and the disease progresses.

Volhard has suggested the theory that blood is prevented from entering the glomerulus by spasm of the afferent artery; and that the swelling of the capillary loops and cellular proliferation is secondary to ischemia. This theory suggests the probability of an anaphylactic reaction in the blood vessels of the kidney. It explains how nephritis could occur after exposure to cold without infection. While it is possible that the swelling, degeneration and proliferation of endothelium are primary; and that their encroachment on the capillary tuft produces ischemia and thrombosis; the vascular spasm theory is further substantiated

by the thick muscle walls of the arteries of the kidneys. To explain why some cases recover and others progress, one might assume the likelihood of recurrence of vasospastic reactions. Possibly too, the adjustment of the partly destroyed or disturbed glomeruli to the increased work leads to further pathology, and in this way, a constant progressive series of changes could be begun, which eventually would terminate in renal insufficiency.

As the precise origin of nephritis is still uncertain, prophylaxis is empirical. It often follows the mildest attacks of scarlet fever. However, avoiding exposure after an attack and remaining at rest during the eighteen-day interval does apparently diminish the incidence of nephritis. This unquestionably applies to other infections; even a "common cold" or "influenza" either of which is rarely complicated by kidney changes. Removal of foci of infection has value, as infection must play an important part; even if the anaphylactic theory is accepted, and we might believe that some cases are caused by exposure to cold alone.

Neither is there specific treatment, once the disease has begun. During the acute stages, limitation of fluid and salt, simply to control edema, are fairly effective. Ewig reports increased output and favorable results with diathermy in acute glomerular nephritis. The caffein diuretics occasionally seem beneficial. The protein regulation is controversial. While limitation is the general practice, it probably has little value unless there is some renal insufficiency and a rise of the protein end-products of metabolism in the blood stream. An increase of protein intake above normal requirement tends to diminish the edema by increasing the serum protein and osmotic pressure within the blood stream. (The loss of serum proteins is ascribed to the increased permeability of the disturbed endothelium of the glomeruli with resultant filtration of albumin into the urine.) Practically, increasing the proteins does not compare to limiting the fluid intake in the control of edema; so perhaps regulating the protein intake in any way during the early stages has little value. If cerebral symptoms, such as convulsions, occur, the oral, intramuscular or intravenous administration of magnesium sulphate is most effective, and this method has generally superseded spinal puncture and sedatives.

During the second or quiescent period, or possible recovery, general hygienic measures, particularly the avoidance of exposure to cold or wet, and removal of foci, are all that can positively be considered as having merit.

As renal insufficiency develops and progresses, limitation of protein intake and forcing fluids (if edema is not present) are the only means of pro-

longing life and staving off uremia. It is surprising how rapidly the urea can occasionally be washed out of the blood stream by forcing fluids, and a high blood urea reduced to almost within normal limits. Life can be prolonged, often for a year or more, by carefully guarding against dehydration and limiting protein intake. As the renal damage becomes greater and the blood urea rises in spite of these measures, true terminal uremia will occur. Once vomiting begins, and the fluid intake is greatly diminished (unless intravenous fluids are administered), the non-protein nitrogen mounts rapidly and the end comes in but a few days.

HYPERTENSIVE KIDNEY*

WALTER CARY, M.D., Dubuque

There are but two main types of nephritis, one in which the secretory portion of the kidney is damaged, the glomerulonephritis, and the other in which the primary lesion is in the smaller arteries and arterioles. The former has been discussed in the previous paper. The latter is of special interest because of its frequency, and also because it is only recently that we have begun to have a clear conception of the nature of the disease.

Most of us remember the day when chronic interstitial nephritis was considered a primary disease. At necropsy the findings were definite and the cardiac hypertrophy, sclerosis and high blood pressure were considered a result of the renal lesion. This interpretation led to many mistakes in the treatment of essential hypertension, perhaps the most objectionable from the patient's point of view being the unnecessary protein restriction over long periods of time.

In order to get the true picture we must remember that at autopsy we only see the end results. In the past cases were studied and the kidneys compared grossly and microscopically. It is no wonder that the classification was complicated. Eventually it was realized that, after all, the trouble was either in the secretory portion, or else a degeneration of the small arteries and arterioles resulting in a definite loss of function from the resulting ischemia. Furthermore, these renal changes are only one bit of evidence of a more or less general disease. All organs may be affected by this same sclerosis of the arterioles, but the most common findings, aside from the kidney, are vascular, with secondary hypertrophy of the heart, so that the condition has been spoken of as cardio-renal-vascular disease and as cardiovascular-renal disease. It is probably best known in this country as essential hypertension.

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When we speak of essential hypertension we include all cases of chronic hypertension which neither clinically nor anatomically can be demonstrated to have evolved from antecedent inflammatory disease of the kidneys or urinary obstruction. The term "essential hypertension" is not fully satisfactory for it is a confession of our ignorance as to its exact nature, but it does express the dominant clinical manifestation, the increased arterial tension.

The vast majority of the patients whom we see with high blood pressure represent cases of this type. They may show a trace of albumin with a few casts, and so are believed to have chronic Bright's disease, but they may die from cardiac failure or a cerebral hemorrhage. We do not know the exact primary cause of the disease, but we do know that there is a progressive degeneration of the arterioles with a resultant gradual reduction in the blood supply to the tissues. With diminished nourishment, secondary atrophic changes take place. With a lowered renal function demonstrated and a high arterial pressure, we consider that the patient has a chronic hypertensive nephritis.

As for the etiology, a family tendency is frequently noticed. Many of these patients have a family record marked by apoplexy, Bright's disease and heart trouble. Just how heredity acts we do not know, but there appears to be a transmission of defective blood vessels from one generation to the next. Overwork, particularly mental strain and worry, and overeating, seem to be among the causes. It is not at all uncommon to find the type of man who has had a hard struggle to build up a business, succumbing to this disease about the time he should be able to enjoy life. It ranks high in the causes of death of physicians, possibly as a result of long hours, mental strain and worry, combined, perhaps, with a little more food than is required by body metabolism. Focal infections may have a bearing, but their elimination seems to have but little effect in most cases. Aside from typhoid fever, infections do not seem to play much part. The intoxications from tobacco, alcohol, lead and products of digestion also seem relatively unimportant.

True arteriosclerosis of the kidney is not of much clinical significance. It involves the large renal vessels and is part of a generalized arteriosclerosis in an elderly person. Sclerosis of the arterioles and small arteries is the finding with essential hypertension, and the renal changes are conclusively shown to be a result of this, the so-called arteriolosclerosis. The change is primarily in the vessels going to the glomeruli, and consists of a narrowing of their lumen either from arterio-

spasm or a diffuse hyperplastic sclerosis. In arteriosclerosis the distribution is nodular, involving only limited sectors, and consists of foci of connective tissue hyperplasia with fatty degeneration. There may be terminal thrombosis of a branch of the renal or coronary arteries, but the lesions are focal. With sclerosis of the arterioles, the disease is general and is not a primary disease of the kidneys.

The same disease process, the arteriolar degeneration, may affect the heart muscle to a more noticeable extent than the kidney. In this case it would be called chronic myocarditis. In the spleen and liver the changes seem to be of little clinical significance, but have been demonstrated. In the pancreas it may have an important bearing on the problem of diabetes, which is so important in persons at the age when sclerosis is becoming prevalent. It may help explain why diabetes tends to run in families. Sclerosis of the arterioles has also been demonstrated in skeletal muscle, the suprarenals and elsewhere. As already mentioned, this type of nephritis is essentially a disease of the arterioles of the body, a general disease, and not primarily of the kidneys. We recognize it only when fairly well developed, and know little if anything of its causes and early changes. We do know that the change in the arterioles leading to the glomeruli affects renal function and may ultimately cause death from uremia if this termination does not occur earlier from cerebral hemorrhage, myocardial degeneration or some other cause.

Physiologists formerly taught that increased peripheral resistance was a leading cause of high blood pressure. In the past few years most investigators have discarded this view on the basis that the small area of resistance from narrowing of the lumen of the arterioles, even in the most extensive cases, could hardly cause the increased blood pressure in essential hypertension due to mechanical obstruction. Vasoconstriction in one area is immediately compensated by vasodilatation elsewhere. Generalized sclerosis of the arterioles does not exist in association with essential hypertension, and therefore cannot cause the latter. The view that hypertension is produced by functional vasoconstriction is being rather generally accepted.

It is in the kidney that we usually find the greatest degeneration of the arterioles. As already mentioned, interference in the afferent vessels results in a glomerular and tubular degeneration due to ischemia. Nature has provided for such a loss by giving us much more renal substance than we need. In animals three-fourths of the kidney substance may be removed without evidence of renal failure. With a slow progressive degeneration of the glom-

eruli, kidney reserve is exhausted and evidences of renal failure will begin to show.

There is no reason why we cannot have a mixed type of kidney change. In fact, sclerosis of the arterioles is present in practically all cases of chronic glomerulonephritis in which there has been arterial hypertension for many years. Histologically, the lesions are identical and the distribution the same as that found in essential hypertension.

Diagnosis of the hypertensive kidney is not difficult in the vast majority of cases. It is usually obvious when there is a definite elevation of blood pressure in a middle-aged or elderly individual. To be sure, there are plenty of exceptions, but with ordinary care one will make few mistakes in diagnosis if one keeps the condition in mind.

Treatment is not very satisfactory because of our failure to know the cause of the disease. The very multitude of suggested cures is evidence that none is satisfactory. Many drugs have been tried, but they all give very temporary relief, if any. The same is true of diets, baths and the like. The damage is present when we first make the diagnosis and, frankly, we do not know enough about the cause to prevent the damage. Removal of any focus of infection is always indicated, but that alone is not sufficient. The proper care of these cases is really a matter of management.

The public as a whole is too well acquainted with high blood pressure. Patients are too fond of telling each other the dangers that may result from it. An insurance examiner may discover an elevation. Immediately the patient goes out and his friends tell him of the people who have had strokes from high blood pressure. Soon a neurotic patient is asking for frequent readings. He is in the same position as the anxious mother who uses a thermometer too much. Fortunately there are now enough people known to have had high blood pressure for years with no harm so that there is a little propaganda toward reassurance.

Many patients with essential hypertension need no treatment and are better off without it. They can be kept under observation without being made too introspective by keeping watch of the urine while the physician takes the blood pressure, making that part of the examination seem to be incidental. It is better not to let the patient know what the exact reading is. An unimportant temporary rise from the excitement of having the test made will depress the patient, if he finds out about it, and do more harm than good.

The keynote for treatment is moderation in all things. Where possible, the occupation should be both pleasant and not too strenuous. The patient should be free from worry, a thing not always possible, but at least the physician should not increase

the worry any more than is necessary. A complete change of scene by a vacation is always in order, but this should be a real relaxation and not the kind with many activities which so many prefer. Exercise depends entirely on the reserve condition of the heart. Even golf might be too much for an individual who has had no exercise for a long time. Usually a little reserve can be built up in the heart so that one can enter that sort of sport.

Diet is the method of control that has been most universally adopted. Various restrictions have been made, depending on the theory that the fundamental cause was faulty metabolism. The two measures most widely used are protein and salt restriction. There is no evidence that excessive protein in the diet has anything to do with the cause of essential hypertension, nor is the blood pressure raised by feeding large amounts of protein. The body needs about one gram of protein a day per kilogram of body weight. There seems to be no justification for reduction below this amount as long as renal function is adequate. Where renal function is impaired, as evidenced by inability to concentrate urine, and where there is high retention of nitrogen in the blood stream, it may be well to restrict protein temporarily, but the disease is chronic and the body needs its quota of protein. Reduction to 50 grams a day can be borne with no discomfort over long periods of time. As with any other food, moderation is the chief requirement.

The benefits obtained from salt restriction are not all that might be desired. Unless there is renal or cardiac insufficiency, with retention of fluid in the tissues, salt restriction is probably not necessary. Here again moderation is indicated. The amount of fluid intake must not be increased because it will overtax a kidney that is already embarrassed. Water, however, is necessary to help flush out the waste products from the body. Aside from salt there is no reason to think that other condiments are excreted through the kidneys. They may cause gastritis, but not nephritis.

Many drugs have been used to treat the condition. When we remember that the cause of renal failure is the destruction of large portions of the kidney parenchyma, it is not hard to see why the drug treatment is unsatisfactory. We have no means of restoring what has been lost nor of safely stimulating what remains.

Discussion on papers of Drs. Kestel and Cary

Harry P. Moen, M.D., West Union: I will have to discuss the paper that I read for Dr. Kestel and also the paper that Dr. Cary of Dubuque read.

You probably know by this time that nephritis is a reaction to injury. It is a very difficult disease to classify correctly. Probably all of you know the dif-

ferent anatomic, pathologic and biochemical possibilities in nephritis. Why is it difficult to classify? Because each case represents different stages of the same morbid process, or different combinations of the same fundamental unit, the pathologic lesion.

To illustrate this a little further: The kidneys are very complex organs. They consist of about 2,000,000 physiologic units. Each unit in itself is very complex. Furthermore, various parts of each unit are so closely interrelated and coordinated that serious damage in one part is followed by correlated changes in other parts of that unit. Again, the etiologic agents may act intermittently, remittently or continuously. Therefore, we can see that the mathematical and biologic combinations possible in this disease make any attempt at a more specific classification practically a hopeless task.

We also know that the biologic and biochemical factors which influence this disease are many. The filtrable viruses, their toxins, and their effects are little understood today. If I were to ask you the etiology of a common cold, I am sure you could not answer. So it is with nephritis. There are many classifications. Why, then, are we interested in nephritis? From the standpoint of prognosis as to life.

Both papers have brought out that there is very little that can be done in the way of treatment. As to the diagnosis of these two conditions, glomerulonephritis and hypertensive kidney disease, it is very encouraging to know that in these times of economic stress a simple test of functional efficiency of the kidney can be made with a urinometer, determining the specific gravity. There is only one qualification that I wish to make to this, and that is that we must always remember that it is possible to miss the diagnosis of so important a condition by examination of only one specimen of urine. The most important function of the kidney is the ability to vary the specific gravity of the urine, and that is the thing with which we must be concerned in the diagnosis of this disease.

Walter Cary, M.D. (closing): In closing, I should just like to call attention to what has been brought out by Dr. Moen. Do not depend too much on laboratory tests in trying to make a diagnosis of hypertensive kidney. The urine is not going to show a lot of albumin. It may show a faint trace. There may not be a positive report of albumin at all. Watch the specific gravity. It is easy to disregard the specific gravity in tests, and yet it is very important. Every insurance examination always calls for it. They are wise in calling for it because they realize the importance of the ability to concentrate urine as shown by a high specific gravity, or an increase of, say, over 1010.

The thing that impressed me in preparing for this talk today was the fact that the hypertensive kidney is merely one evidence of a general disease and is not the disease itself. Remember the sclerosis of the arterioles; in other words, arteriolosclerosis, and you get an entirely new conception and, I think, a correct conception of what the disease is.

TUBERCULOSIS OF THE KIDNEY*

J. C. DONAHUE, M.D., Centerville

There are few pathologic conditions of the human race concerning which there is such diversity of opinion as that regarding renal tuberculosis. The literature is filled to overflowing with a multitude of expert conclusions as to the various manifestations of this condition, and it is just as full of contradictions; internists, surgeons, urologists and roentgenologists all differ on the subjects of diagnosis, treatment, pathology, and even exact etiology.

This widespread difference of opinion is due, for the most part, to the study of various stages in this kidney complication, some authors drawing their conclusions from one stage, others from another. This condition of affairs reminds us that more complete work must be done; more thorough, intensive study pursued, before we can hope for success such as is crowning the efforts of those dealing with pulmonary tuberculosis.

With all this diversification of expert analysis, is it any wonder that we continue to plod along our darkened course, eagerly groping our way about and continuing to make our diagnoses only in the terminal stages of this, a fatal, progressively destructive disease?

I shall have nothing new or startling to offer in this paper, but will attempt to give a brief resumé of some more or less accepted facts in this urologic tragedy. Time will permit only a slight survey, but it is my earnest hope that it may instigate a closer scrutiny of urologic conditions, no matter how trivial they may seem. By this means we will recognize the condition in its earlier stages. Necessarily, I will deal primarily with the diagnosis and treatment of renal tuberculosis.

Renal tuberculosis is a disease of early adult life, occurring usually between the ages of twenty to forty, the general average being about thirty. This age incidence is so usual that it is one of the common pitfalls; although a disease of early adult life, it occurs in any age from six months to seventy-five years and many of the cases at the extremes of life are overlooked because of the fact that they are considered outside the limits.

Renal tuberculosis in infancy concerns us very little, as practically all cases occurring under three years of age are a part of a general acute miliary tuberculosis, and are fatal within one year. Many cases do occur in childhood life, however, and it is only through thorough urologic examination that the condition may be detected. All too often, these persistent cases of so-called pyelitis and cystitis in children, so stubborn to treatment, yet with few

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subjective symptoms in the beginning, prove finally to be tuberculous in origin and result in chronic renal tuberculosis of early adult life.

May we urge more detailed attention to urinary tract examination in children; more cystoscopic examinations; more smear examinations; more animal inoculations, for the detection of this disease which, if found early, can be treated and controlled. If all persistent, stubborn cases of pyuria in children were so examined, it is my opinion there would be a lessening of the incidence of renal tuberculosis in young adult life. Incidentally, the number of cases of renal tuberculosis coming to operation is beginning to decrease, due to the arrest of cases of pulmonary tuberculosis and especially to early diagnosis of tuberculosis in young adults, with its arrest before kidney involvement.

Renal tuberculosis occurs in 16 per cent of all patients with urologic lesions, and nephrectomy for the condition comprises 30 per cent of all operations on the kidney: a dire condition worthy of your attention.

It is generally agreed that it is a hematogenous affair, secondary to a focus elsewhere in the body, especially in the lungs, but may come from tuberculosis infected bone or lymph glands. Medlar has shown that 70 per cent of all patients with advanced pulmonary tuberculosis, have renal involvement as a complicating factor, the greater majority of which present no subjective symptomatology of this renal invasion during their lives. It is found only in the autopsy examination after death.

Sex. This condition, slightly more common in males (60 to 40), is of little importance except that it has a decided tendency to rule out the lower urogenital tract as a primary focus in the males, with an ascending type of infection finally complicating the kidney tissue. This is practically never the avenue of invasion, and tuberculous epididymitis, prostatitis and orchitis, are not the causative factors or primary foci of infection in renal tuberculosis.

There are many classifications of this condition, so numerous that time will not permit me to designate them. Suffice it to say, that a majority of investigators employ their own classification, but for the most part these are based upon the extent of the destruction or reparative process present.

There is one classification often included, rather extensively recognized upon the continent, that I believe is mandatory for me to present: so-called tuberculous bacilluria, a condition in which tubercle bacilli are found in the urine with no renal involvement. This is a pathologic impossibility, and at no time is it possible for tubercle bacilli to pass through kidney substance without leaving in that

kidney demonstrable, pathologic tuberculous lesions. I present this so-called tuberculous bacilluria merely to call to your attention the fact that it does not exist, and that the finding of tubercle bacilli in the urine is indisputable evidence of renal tuberculosis, regardless of the age of the patient, his apparent lack of subjective symptomatology, his normal kidney function, normal blood urea, his feeling of well-being and apparently excellent physical condition; tubercle bacilli in the urine are evidence of renal tuberculosis and are always to be treated as such.

There are many factors to be considered and much work to be done before a decision is reached as to whether this condition is primarily unilateral or bilateral, but it is sufficient to know that clinically, at least, 80 to 90 per cent of these cases are primarily unilateral, and if they are so diagnosed and treated, we may hope for a very high percentage of successful recoveries. It may be that the process is always bilateral with the destructive process more extensive in one kidney, and that through adequate therapy of this predominating lesion, arrest of the condition is effected in the other kidney. Whichever may eventually be proved the correct hypothesis, at least clinically 80 to 90 per cent may be regarded as primarily unilateral, subject to successful treatment, with arrest of the destructive active process.

SUBJECTIVE SYMPTOMS

What constitutes the chain of symptoms in renal tuberculosis? They are subjective and objective, but the first are of special significance. These subjective symptoms are chiefly and primarily vesicular.

Frequency of Urination and Nocturia: Eighty per cent of all cases of renal involvement present this subjective complaint. It is due to bladder irritability and must always warn us of possible tuberculous invasion. In the beginning it is worse at night and in cold weather, gradually increasing in severity. This increase in frequency coincides quite closely with the destructive process which is present in the bladder, and in those conditions where the process has extended to include the bladder wall, there is marked contraction and irritability of the bladder, necessitating urination as often as every fifteen to thirty minutes. Patients advanced to this stage will never be free from bladder irritability under any form of treatment; consequently it is of prime importance to make an early diagnosis of the causative factors of bladder irritability, with subsequent correction, before advancement to the stage where the patient is doomed to pain and despair for the few remaining years of his life.

Hematuria: One-half of your patients with renal tuberculosis will give you a history of passing blood at some time or other.

Painful Urination (dysuria): Forty per cent give a positive history, particularly of terminal pain, but it may begin at the beginning of urination and exist throughout.

Pain in the Back: Thirty per cent present this complaint, of importance only when linked with other evidence.

Loss in Weight, Fever, Chills, Nausea, Vomiting, Renal Colic, Incontinence: These are often in evidence in this disease and are positive in from 10 to 30 per cent of your cases.

A complete history is essential. It will elicit several of these cardinal symptoms in a vast majority of your cases. In fact, 80 to 95 per cent of your patients will give you one or several of these subjective complaints just enumerated. They are the beacon lights and if regarded will prove of much benefit to your patient and incidentally to yourself.

OBJECTIVE SYMPTOMS

The ease with which the diagnosis is usually made depends, all too often, upon the extent of the destruction existing. Although the subjective symptoms are not always an indication of the activity, even the objective findings are often not in proportion to the extent of the pathologic lesions present in the renal tissue. Many bacilli in the urine do not necessarily signify advanced irreparable damage. Likewise, a few bacilli do not always signify an early lesion, as there may be an old lesion, or as so often is the case, a so-called closed chronic renal tuberculosis. A searching inquiry must therefore be made and a complete urologic examination completed in order to determine the diagnosis and the extent of the kidney damage.

Urinalysis:

Pus: Pyuria exists in 90 per cent or more of the cases. If there is pus in the urine, examine it, culture it, inject it into guinea pigs, not once, but many times; make repeated tests. Sterile pus in acid urine is pathognomonic of renal tuberculosis.

Red Blood Cells: At some time in the course of this disease you will find red blood cells in the urine in 100 per cent of your cases. They are not always present at every examination, but on the other hand about 50 per cent will present this evidence of renal invasion upon initial examination.

Albumin: Albumin and casts are present in 80 per cent of cases. Neither is of any significance *per se*.

Tubercle Bacilli: These organisms are to be found in 90 to 100 per cent of your cases, in

smears, cultures, or animal inoculations. Not upon first examination, but only after repeated search may these causative agents be demonstrated. Consequently if a determined course is followed as outlined above, in all cases of pyuria, with sterile pus in acid urine, the results will be positive in about nine-tenths of your cases.

Cystoscopy: With a bladder which is necessarily irritable, cystoscopic examination should be performed under anesthesia, preferably caudal. The bladder picture is varied, but usually typical. The bladder is involved early and the picture presented depends upon the stage of the tuberculous process and the extent of its invasion. This varies from a small tubercle near the orifice of the infected ureter, a small ulceration typical in outline, to a marked invasion of the bladder wall with subsequent contraction, and the typical so-called "golf-hole" appearance of the ureter. This characteristic "golf-hole" appearance, so often discussed, is a late manifestation of the disease, and is of grave prognostic value to your patient. With it there will usually be many other evidences of advanced urogenital tuberculosis.

Infiltration of the bladder and ureteral walls may be so extensive that the ureteral orifice is obliterated and cannot be catheterized. Ureteral changes are present in all cases of renal tuberculosis and can be definitely relied upon as to diagnostic importance. The ureter is large, edematous, stiffened, with a diminished rather than an enlarged lumen. These changes are due to early active infiltration of the ureteral wall. This condition does not exist in any other kidney infection.

All too often urine will be found carried by one ureter, the other having been closed by nature's attempt to arrest the destructive process, with the resulting, so-called nature's cure, "autonephrectomy," a condition of advanced renal tuberculosis in which there has been so much infiltration of the ureteral walls that the ureter is closed and the infected kidney is not functioning. This condition occurs more often than in any other kidney infection, and no doubt explains many of the so-called cures.

These cases of autonephrectomy of necessity do not excrete tubercle bacilli, and if the functioning kidney is not involved, bacilli will not be found in the urine, and there is often a lessening of bladder symptoms. Some of these cases remain quiescent for many years, but given sufficient time, all will become secondarily infected, with resulting pyonephrosis. Surgical removal is then imperative. These cases are diagnosed only upon cystoscopic examination, failure of ureteral catheterization, and typical radiographic findings.

Much has been said of ureteral catheterization, but in the hands of an expert and with due regard for the possibility of infecting a non-infected kidney and trauma to an infiltrated ureteral wall, much of benefit can be learned by this means without damage to your patient. Pyelograms, separate kidney function, unilateral or bilateral invasion, are of decided importance in this disease. The pyelogram often presents the very earliest picture of slight kidney alteration, even before there is any change in the kidney function test; in many cases the kidney function test shows the infected kidney to be performing better than its partner. In view of this, I believe it is imperative that a pyelogram be obtained of every case which appears to have a minimum of destructive invasion. In advanced cases where the diagnosis is simple by other methods, I question the advocacy of the pyelogram, but in early, obscure, difficult cases, it is certainly indicated and of much value.

Physical examination of the urogenital tract usually is negative. Sometimes in rather advanced cases, it is possible to palpate a thickened ureter vaginally or rectally, but this is usually present only after long standing invasion where other symptoms and findings, more significant, can be elicited.

Palpation of the infected kidney is a delusion, as commonly it is the non-infected kidney which is enlarged and tender, due to compensatory hypertrophy and edema, the result of the excessive burden which it has to carry.

Tuberculin: Of doubtful value in the ordinary case, its administration for diagnostic purposes is not unattended with danger and irreparable damage to an already damaged kidney.

Your diagnosis of renal tuberculosis, therefore, will be based upon the subjective history of frequency, nocturia, hematuria, dysuria, and a lesser chain of complaints such as loss of weight, chills, fever, nausea, vomiting, renal colic, and incontinence, as well as upon the objective findings of pyuria, acid sterile urine, hematuria, cystoscopic bladder picture, ureteral catheterization, pyelograms, x-ray plate, and positive tubercle bacilli in smears, cultures, or animal inoculations.

These signs and symptoms are in evidence in all cases and should call for heroic efforts to ward off this destructive invasion, which is probably one of the most painful and progressive lesions of the urogenital tract.

TREATMENT

Again there is a widespread difference of opinion as to the indicated therapy, varying from that of Caulk, who advocates prompt nephrectomy in all cases of unilateral renal tuberculosis, irregardless of the stage of the infection and amount of

kidney destruction, to that of Crane and others, who advocate medicinal care almost exclusively.

The results obtained by these men are due to the stage and degree of invasion, and all merit our wholehearted attention and study.

I do not hold with the view that tuberculosis of the kidney never heals. There is no definite reason to assume that tubercle bacilli act differently in kidney tissue than in any other region of the body. They have no especial affinity for renal substance, and consequently, with the plentiful blood supply of the kidney, I am of the opinion that many of the individual lesions do heal in the incipient stage.

The treatment depends upon many factors: the extent of involvement, as shown by unilateral or bilateral invasion; bacteriologic study of the urine; amount of bladder destruction; separate kidney function test; general condition of the patient.

In the early stage, with slight degree of involvement, every case is medical and should be so treated, the treatment being the same as strict sanatorium care of the pulmonary type of the disease: rest, suitable food (rich in fats), cod-liver oil, sunshine, tonics, ultra-violet radiation. These cases must be checked repeatedly, and unless improvement is noted, or if the disease is progressive, then surgery is a matter of imperative need.

Surgery in bilateral cases is fatal. It is to be performed only in extensive cases with secondary infection and pyonephrosis of one kidney, and in these cases it will prove of little value and consequently is of questioned benefit.

Surgery is indicated in all advanced unilateral cases, and all cases not improved under strict sanatorium care.

Nephrectomy is a matter of choice. The infected kidney with all the perirenal fat is to be removed, and the ureter ligated high or moderately low.

The too often complicating factor of sinus following so many of these operations is due to incomplete removal of perirenal fat, and not to any method of ligating or treating the ureter.

Nephrectomy should preferably be done under spinal anesthesia, but is successfully performed under gas, oxygen or ethylene.

As a rule the easier method is to locate the indurated, enlarged ureter and free it, then work from below upwards. Perinephritic involvement may have been so extensive that intracapsular removal is a matter of necessity, in which case the fat and capsule is to be removed later. In every case, however, it is imperative that the perirenal tissue be removed.

You may use drains or not, as your surgical

experience dictates; and expect recovery in two months. Fifty per cent of these cases will be cured 10 to 15 years after operation. The other 50 per cent will have succumbed, 18 per cent to tuberculous involvement of the other kidney.

The after-care is strict sanatorium care, such as outlined for medicinal therapy, with the judicious use of tuberculin.

The success of either method depends primarily upon the early diagnosis, through competent, complete urologic examination of every case presenting any of the signs or symptoms of renal tuberculosis. It necessitates the close cooperation of the internist, surgeon, pediatrician, urologist, and roentgenologist, both in diagnosis and treatment. Through this happy cooperation we may in the future hope for a marked decrease in the incidence and mortality of this dreadful urogenital tragedy, renal tuberculosis.

In conclusion, may I remind you that:

1. Every case of pyuria is tuberculous until proved otherwise.
2. Renal tuberculosis occurs more often in childhood than is supposed.
3. Early diagnosis is essential.
4. Clinically, at least, renal tuberculosis is unilateral in the beginning.
5. The cystoscopic picture is usually definite.
6. Surgery is indicated in advanced, unilateral progressive cases.
7. Sanatorium care is necessary in the early stages.
8. The subjective symptoms are definite.
9. Pus in sterile acid urine is evidence of tuberculosis of the kidney.
10. Tubercle bacilli in the urine mean renal tuberculosis and never tuberculous bacilluria.

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PERINEPHRITIC ABSCESS*

RAY A. FOX, M.D., Charles City

Perinephritic abscess, although not of common occurrence, is an important subject and the diagnosis is doubly significant. It is doubtful whether any other abscess can elude detection for such a long time, or pus collect in any other situation in such phenomenal amount, and yet the diagnosis

be so far at sea. Oftentimes, the difficulty continues until the local symptoms become so marked as to render it impossible not to suspect the cause of the malady. Habein, of the Mayo Clinic, reports that the time between the onset of the symptoms and surgical treatment varies between one and forty weeks, the average being approximately six weeks. This delay in surgical treatment carries with it a long trend of highly dangerous pathologic changes which may cost the patient his life, such as, septicemia, pyemia, toxic nephritis, lung abscess, or even kidney destruction. It is for these reasons that I wish to be practical and use the allotted time to emphasize symptomatology and diagnosis.

A brief classification of the etiology will suffice, since a paper strictly limited to this phase was exceptionally well presented before the seventy-fourth annual session by Dr. R. H. Lott.

Five etiologic possibilities are to be considered: (1) Penetrating wounds directly carrying in the pyogenic microorganism, a very small group; (2) Direct extension from suppuration in neighboring organs; retrocecal appendiceal abscess, subphrenic abscess, and empyema of the chest; (3) The infection may travel from the lower urinary tract, pelvic organs, and genitalia by way of the retroperitoneal lymphatics. This route is seldom used by nature and it is impossible, clinically, to differentiate it from metastasis by the blood current. For practical purposes, the etiology almost exclusively depends upon two causes: grave destructive lesions of the kidney infecting the perirenal area by direct extension, and metastasis by the blood stream; (4) Hunt, reporting from the Mayo Clinic in 1924, found that 44.3 per cent of 106 cases of perinephritic abscess were secondary to primary renal disease. The common causes, in order of frequency, were: pyonephrosis, lithiasis, tuberculosis, and traumatic rupture of the kidney; (5) The metastatic or hematogenous type of perirenal abscess.

It is accepted that during the progress of any acute infection a certain number of microorganisms find their way into the blood stream and that many of them are excreted through the kidney. It is a striking fact that perinephritic abscess often follows apparently insignificant, acute, superficial infections, such as furuncles, carbuncles, paronychia, local abscesses, and acute tonsillitis. *Staphylococcus aureus* is almost routinely the organism. Due to the peculiar arrangement of the renal vessels, forming end arteries, the infecting organism lodges near the periphery of the kidney and forms a cortical abscess or multiple abscesses. Rupture usually takes place through the capsule of the kidney into the perirenal fat which is loose and cellu-

*Presented before the Eighty-first Annual Session, Iowa State Medical Society, May 4, 5, 6, 1932, Sioux City.

lar, not extremely vascular, and offers little resistance to the spreading infection. Thus a perinephritic abscess results. Numerous cases are reported in which, at early operation, a solitary, large cortical abscess was found which had not as yet ruptured. *Cortical renal abscess is probably the most common cause of perinephritic abscess.* Hunt reported 55.7 per cent of 106 cases due to this cause. In over half of these, it was proved, at the time of operation, that the perinephritic abscess was in direct communication with a cortical abscess.

SYMPTOMS AND SIGNS

In this time-limited paper it will be necessary to eliminate discussion of the symptomatology of the abscess secondary to the primary renal pathology. The diagnosis is usually evident early, as attention is already focused upon the renal symptoms, and the treatment obviously depends upon the primary renal pathology. We shall therefore confine our discussion to the metastatic or hematogenous type, as this represents the largest group and at the same time the most difficult to diagnose. Marked renal damage or general sepsis may have supervened before the diagnosis has been determined.

The symptomatology is extremely vague and varied. This vagueness is often a reason for considerable delay. In fact, the symptomatology is so variable that we cannot even attempt to divide the cases into types or groups. Rather, we will take each symptom and discuss its variations.

There is usually a history of preceding superficial skin infection, such as boils, carbuncles, paronychia, local abscesses, or septic wounds. A history of some previous infection can be obtained in practically every case if carefully looked for. The infection, however, might gain entrance through a very slight abrasion so as to entirely escape the patient's observation. The length of time elapsing between the occurrence of the original focus and the development of the perirenal signs may be from two to six weeks or longer. At first the symptoms and signs are often mild and indefinite, and usually require from two to three weeks before the condition assumes a graver aspect. Only occasionally are the symptoms acute from the onset, and chills, high temperature, and generalized aching pains may force the doctor's decision.

There is no pathognomonic sign or symptom by which an early diagnosis can be made. There is, however, one constant symptom and that is *fever*. This is of the septic or intermittent type and is present in all cases. This may not at first be very high, for example one hundred degrees in the afternoon, but before long it rises and a daily

variation in temperature of four or more degrees is not at all uncommon.

Pain is another constant early symptom. Only rarely is it so severe as to draw attention to the focus. Usually it is only of a dull, aching and steady type. It is definitely localized over the affected kidney and usually not referred. At first it is usually mild, and may be relieved by aspirin and heat, but gradually becomes so severe that even morphin is required.



Plate I. A typical K.U.B. roentgenogram of a patient with a right sided perirenal abscess, of the metastatic type. Note the obliteration of the psoas muscle outlined on the right side.

Tenderness in the costovertebral angle is the rule. It is present in about 80 per cent of the cases, and is of great diagnostic importance. Murphy's fist percussion may be required to elicit the tenderness. The majority of abscesses are located posterior to the kidney, producing the maximum point of tenderness in the costovertebral angle. It is easily understood, however, that at times no tenderness can be elicited, especially if the abscess is in the region of the upper pole of the kidney beneath the ribs.

Fullness, a bulging, or tumor mass in the renal area posteriorly is a finding that makes the diagnosis simpler, but it is a late sign and occurs in only about two-thirds of the cases. At first this may be very slight, but distinct. Still later this area

may have a peculiar doughy feeling to the examining fingers. This swelling and doughiness is more pronounced when the patient assumes a sitting position and leans forward as far as possible.

A definite *leukocytosis* is uniformly the rule. The count averages from twenty to twenty-five thousand. Anorexia, nausea, and even vomiting may be present. Chills are occasionally an initial symptom, and later in the course of the disease daily chills are not uncommon. Sepsis soon accompanies the pain, fever and tenderness. The patient feels and looks ill.

Urinary examination and pyelography findings are characteristically negative. This is understandable when we remember the pathology. The abscess started in the periphery of the renal cortex and ruptured through the capsule. Therefore, unless a cortical abscess ruptures first into the calices or the renal pelvis (a very rare occurrence), we should expect negative findings. The urine is usually normal except for varying amounts of albumin; occasionally the microscope will show red blood cells and pus cells. In the cases that follow primary renal pathology, the pyelography and urinalysis will naturally depend upon the original disease.

DIAGNOSIS

The successful treatment of perinephritic abscess is dependent upon early operation after an early diagnosis. I am convinced that the most important factor in the diagnosis of perinephritic abscess is to *suspect the condition*. In all unexplained fevers, this diagnosis should be considered and should be doubly suspected in cases that have preëxisting or concomitant boils, carbuncles, paronychia or peripheral infections. Intermittent fever, lumbar pain, costovertebral tenderness, lumbar fullness or bulging, and a marked leukocytosis are the outstanding symptoms and signs. Fever, leukocytosis, and varying degrees of lumbar pain, however, are regularly present. We must also remember that contrary to most urologic cases, the urinary findings are usually of so little value that they do not aid in the diagnosis. It is needless to say that a complete urologic and cystoscopic examination should be made. In the metastatic types, it is usually essentially negative, but pyelographic studies are necessary to determine whether the abscess is of the metastatic type or secondary to some primary renal pathology. It is obvious that this information is necessary for proper treatment.

The Roentgen ray film is usually of very definite value in the diagnosis. There are two distinct signs, which, when present, are very helpful in establishing a diagnosis. The first is an obliteration of the outer margin of the psoas muscle on

the involved side, together with the indefinite kidney outline, which is often striking when compared to the other side. This finding alone, of course, is not pathognomonic because other conditions may obscure the edge of the psoas, such as any large kidney growth, retroperitoneal tumor, or psoas abscess. The second sign is a definite lateral curving of the spine away from the involved side. This is explained as due to contraction of the spinal muscles near the abscess.



Plate II. Pyelography of same case. Normal pyelography which is typical in the metastatic type of perirenal abscess. Again note the obliteration of the right psoas muscle outline. Also note the slight but definite curving of the spine.

TREATMENT

The treatment is simple and definite, and consists of early surgical drainage of the abscess. Few cases of perirenal abscess require more than simple drainage. The lumbar incision should be adequate, so that complete exploration of the perirenal space can be carried out if necessary to locate an abscess, which may be placed anterior to or above the kidney; also, the abscess should be carefully explored with the finger to make sure that all pockets are freely opened and drained. I believe that where the diagnosis is probable, it is better to err on the side of having explored and found no abscess than to have a case continue until the diagnosis is inevitable. Also, I doubt that aspiration for diagnosis of perirenal abscess is advisable. If

you aspirate and find pus, you operate anyway. If the diagnosis is probable and you fail to aspirate pus, nevertheless, I feel that exploratory operation is indicated, because it is easily understandable how the aspiration needle may miss an abscess above or anterior to the kidney. In addition a thorough needling is not without danger.

The treatment for perinephritic abscess that is secondary to primary renal pathology, of necessity may have to be more radical. Cases of tuberculosis, pyonephrosis, or multiple cortical abscesses may require nephrectomy. The decision as to primary nephrectomy, or drainage and secondary nephrectomy, will rest upon the individual case and the patient's general condition. No definite rule can be made. Simple primary drainage often reduces the risk of later nephrectomy, even though the latter is rendered technically more difficult by the transformation of loose fat into dense scar tissue.

SUMMARY

1. Etiologic factors of perinephritic abscess, for all practical purposes are of two types: secondary to primary renal pathology and metastatic or hematogenous.

2. The important relationship of preëxisting or coëxisting peripheral superficial infection in the causation of perirenal abscess should be emphasized.

3. Routine urologic study is important in excluding or proving primary renal disease but does not further a positive diagnosis in the metastatic type.

4. The chief diagnostic points are: unexplained fever, leukocytosis, costovertebral pain and tenderness, tumefaction in the lumbar region, x-ray examination.

5. The treatment is complete surgical drainage as soon as a diagnosis has been made.

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Discussion on papers of Drs. Donahue and Fox

Con R. Harken, M.D., Osceola: The two conditions that I have been asked to discuss have certain characteristics in common; they involve the kidney, they do not occur very often in general practice and both present possibilities for serious and embarrassing errors in diagnosis. Dr. Donahue has waded through a mass of chaotic and contradictory literature and

has produced his paper "Tuberculosis of the Kidney," in which essential facts are correlated and presented in a clear and rational manner.

In spite of the earlier recognition of this disease which would tend to swell the figures of its incidence, hospital records show a 25 per cent decrease over a ten-year period.

Certain general factors have accomplished this: (a) Early recognition and arrest of pulmonary tuberculosis with the prevention of massive lesions; (b) isolation of cases; (c) sanitarium treatment, knowledge of hygiene and healthful living, together with a recognition of the value of cholesterol and vitamin-containing foods, and sunlight; (d) pasteurization of milk; improved animal husbandry, and tuberculin testing of dairy cattle have contributed greatly to this improvement, arguments to the contrary notwithstanding.

Frequent micturition is the most common symptom and hematuria is the earliest signal of renal tuberculosis. In the textbook which I used more than twenty-five years ago, Osler stressed the importance of these signs and stated that frequency was due in the early stages to the initial polyuria and to non-tuberculous inflammation in the region of the trigone of the bladder. In the light of modern knowledge we can explain this bladder irritability as a specific protein sensitization due to contact of the mucous membrane of the bladder with the tubercle bacilli and their decomposed proteins washed down in the urine from the tuberculous kidney, as there is really produced in the bladder a Von Pirquet or Calmette reaction. This interesting phenomenon explains not only the important initial irritability but also the spectacular relief which occurs when the diseased kidney is removed.

Frequency and hematuria are like sputum and pulmonary hemorrhage, they call for acid-fast stains and careful study, all too frequently neglected.

When we realize that patients may have perinephritic suppuration for forty days before entering the hospital, that only one in ten cases is accurately diagnosed, and that the kidney is suspected in only one in three cases, we are better qualified to appreciate Dr. Fox's comprehensive presentation. Perinephritic abscess is not common enough for any one surgeon to have a preponderant experience in its diagnosis. Then, too, these patients are generally first seen by the family physician or internist, whose experience is even smaller.

The fatty and connective tissue surrounding the kidney does not have a rich nerve supply capable of definite localization of sensations. Such an abscess is surrounded by gross anatomic structures which may allow pus to accumulate in phenomenal amounts and still elude detection.

The modern physician studies the x-ray shadows and evaluates such signs as an elevated diaphragm, and obliterated psoas margin, an obscure kidney outline, a displaced colon or perhaps a curved vertebral column. The older clinicians, as exemplified in the writings of the elder Gibney, studied the patient who

curved his spine, flexed his thigh and shifted his weight to avoid the pain from psoas action.

To suspect the condition is the most important factor in the diagnosis, as expressed by Dr. Fox. Tenderness in the costovertebral angle which, to elicit, may require Murphy's fist percussion, is also emphasized. May I suggest that we adopt Murphy's fist percussion as a routine procedure in all physical examinations involving the trunk, as it will not then be necessary to tie a string around the finger in order to become "kidney conscious."

In closing I would certainly recommend that printed copies of these papers by Dr. Fox and Dr. Donahue be carefully preserved for rereading and future reference.

HEAD INJURIES

Review of Newer Aspects of Treatment*

RICHARD O. PFAFF, M.D., Des Moines

The increasing frequency of head injuries brings forth a demand for a well organized plan of therapy based upon fundamental principles. It is obvious that improved methods have been advocated with a gratifying reduction in mortality, as shown by Steward's series of 617 cases with a death rate of 52 per cent in 1922; 510 cases reported by McCreery and Berry¹ in 1928, showing a decrease to 39 per cent and Mock's review² of 100 consecutive cases in 1932 with a mortality of 20 per cent.

The purpose of this paper is to present the recent developments of treatment in cases of head injuries and to outline briefly a program which has been effective in reducing this appalling mortality.

CLASSIFICATIONS

There are numerous splendid classifications of head injuries based upon the type and site of fracture. The following classification of Abbott³ is simple and has proved satisfactory.

"All patients with head injuries have been at least momentarily unconscious or dazed are included under the classification.

1. Massive brain damage.
2. Skull fractures and scalp lacerations.
 - a. Without evidence of localized brain damage.
 - b. With evidence of localized brain damage.
3. Cerebral concussion.
4. Middle meningeal hemorrhage."

Massive brain damage is hopeless. These patients usually die within a few hours after admission. Palliative treatment alone should be considered. Surgery is contra-indicated.

Skull fractures and scalp lacerations, together

with concussion, form the larger portion of head injuries. These demand deliberate and conservative treatment. Skull fractures without evidence of localized brain damage should be treated expectantly and observed closely for the development of localized signs. Skull fractures with evidence of localized brain damage must be brought from the primary state of shock before surgery is contemplated.

Cerebral concussion may be only a temporary loss of consciousness or a prolonged coma. These cases demand close observation with regard to blood volume and respirations.

Middle meningeal hemorrhage is a definite clinical entity characterized by loss of consciousness, with a lucid interval followed by increasing stupor, general symptoms of compression and contralateral paralysis. This is a surgical emergency, but operation should be deferred until the patient has recovered from shock.

TREATMENT

As a general rule patients suffering from a head injury are in a state of shock when admitted. This is evidenced by low blood pressure, sub-normal temperature, cold, clammy skin, and a pulse rate above 120, often weak and feeble. The only treatment at this time is that for shock. Heat to the body is essential. Pituitrin may be given if the systolic blood pressure is below 85 mm. Hg. Fifty c.c. of a 50 per cent solution of glucose may be given intravenously to restore blood volume and relieve cerebral edema.

Presuming that the patient survives the initial shock, scalp lacerations may be syringed out with normal saline, followed by adequate germicides. The wound may then be approximated.

Temple Fay⁴ and others advocate lumbar puncture after recovery from shock to determine the character of the spinal fluid pressure. Fay stressed the importance of this procedure by stating, "A lumbar puncture with careful manometric readings must be done and irrespective of the claims made by those opposed to lumbar puncture, an intelligent management of the case is impossible without the knowledge of the pressure mechanism and the presence of bloody cerebral spinal fluid which is so frequently encountered where no signs or symptoms may disclose its presence."

Careful neurologic examination should be made after recovery from shock. The size and reaction of the pupils should be noted. Reflexes should be examined carefully, especially the Hoffman and Babinski. Paralysis, either facial or of one or more extremities, should be noted. One should endeavor to determine whether the patient is in a state of stupor or aphasia.

*Presented before the Medical Forum Club, Des Moines, January 29, 1932.

Restlessness can be controlled by the use of sodium luminal or codein sulphate hypodermically, and chloral and bromids per rectum. Morphine sulphate should never be administered in injuries of the head for it is a respiratory depressant.

The pulse, temperature and respirations should be noted every fifteen minutes and the blood pressure every half-hour. These fundamental considerations form the basis for our treatment. Each will be considered in turn.

Pulse Rate. If irritation of the vagus is present the pulse rate falls to 60 or lower. If this occurs an effort should be made to determine the cause which may be: (1) bloody cerebral spinal fluid; (2) cerebral edema; (3) edema of the cardiac center; (4) middle meningeal hemorrhage. Bloody cerebral spinal fluid is relieved by lumbar puncture. Cerebral edema and edema of the cardiac center are relieved by the use of (1) lumbar puncture; (2) a saturated solution of magnesium sulphate, 3 oz. of magnesium sulphate to 4 oz. of water, either per mouth or per rectum; (3) glucose, 50 c.c. of a 50 per cent solution intravenously. The treatment for a middle meningeal hemorrhage is surgical.

If the pulse rate rises above 120 it is a demand for more blood volume and may be met by repeating the glucose with small amounts of saline.

Temperature. A temperature rising rapidly to 106 or 107 degrees F. usually indicates hemorrhage into the brain substance. A temperature of 107 degrees or above rapidly destroys the functions of the brain cells and therefore it is important that a rapid rise in temperature be checked early by tepid sponge baths every half-hour if the temperature is 102 or above. The skin should be left exposed and moist, thereby permitting rapid evaporation, although the patient must be protected from drafts.

Respirations. A study of the respiration is a valuable guide in the treatment. A respiratory rate of 26 or more indicates cerebral irritation and spinal drainage may reveal a bloody fluid.

A respiratory rate of 40 or above induces an alkalosis which is undesirable because of the associated tissue edema. This is combated by placing a wet towel over the patient's mouth and nose, allowing him to rebreathe his own carbon dioxide.

A respiratory rate of 16 or lower indicates an increase in intracranial pressure. A falling respiratory rate in the presence of a clear cerebral spinal fluid should cause anxiety over the possibility of a middle meningeal hemorrhage.

Edema of the respiratory center is associated with slow respirations but of a Cheyne-Stokes variety. Respiratory stimulants, atropin, caffeine,

carbon dioxide, are indicated when respirations fall below 16. Glucose and magnesium sulphate aid in combating medullary edema.

Blood Pressure. The blood pressure readings are an indication of the efficiency of the vascular system. The systolic pressure represents the force of the heart against peripheral resistance. There is little cause for concern when maintained above 85 or below 175 mm. Hg. The diastolic pressure is the most important for it represents the peripheral vasomotor bed and its tone. McLeod in his investigations found that at a pressure of 60 mm. Hg. the blood may be nearly saturated with oxygen, whereas at pressures below 50 mm. Hg. it readily loses oxygen, and at 10 mm. Hg. there is complete reduction. When the diastolic pressure reaches 40, the oxygen dissociation curve has reached a point where the oxygen on the red blood cell is no longer available when it reaches the capillaries and thus anoxemia may be present.

Therefore every effort should be directed toward maintaining a diastolic pressure above 40 mm. Hg. Stimulation of the vasomotor bed by the use of pituitrin, atropin or strychnin, should be employed.

A lumbar puncture should be made as soon as the patient has recovered from the state of shock. The color of the fluid and the pressure should be noted carefully. The pressure should be estimated only by the use of a spinal fluid manometer for it is impossible to determine the cerebral spinal fluid pressure by the rate of flow from the needle.

If the spinal fluid is bloody, drainage of the fluid until the pressure reading is reduced to within normal limits is indicated. "The red blood cells produce an intense reaction in the subarachnoid spaces and they tend to obstruct the normal pathways and filter for elimination of the cerebrospinal fluid." (Weed and Bayler.)

If clear fluid is obtained on spinal puncture, the case becomes one of cerebral spinal pressure with or without drainage, and magnesium sulphate and glucose should be employed as dehydrating agents.

Surgical treatment of injuries of the head is indicated in three types of cases: (1) middle meningeal hemorrhage; (2) depressed fractures as evidenced by x-ray; (3) compound fractures. In regard to subtemporal decompression, Loyal Davis says, "We feel that subtemporal decompressions are never indicated in patients in coma from a skull injury. Bilateral subtemporal decompressions are mentioned only to condemn them as doubly worse. To obtain a decompression effect it is of course obviously necessary to open the dura mater. Regardless of how gently

or carefully any cranial operation is done in which the brain is exposed, edema results. This is added insult to injury. In complete accord with Rand and others we have found one sign, however, which is pathognomonic and upon which considerable reliance may be placed. I refer to the dilation of the pupil upon the side of the hemorrhage. This sign, in the absence of any corroborative evidence, is sufficient indication for surgical interference and points rather directly to the side of the lesion."

It must be emphasized that no operative procedure should be considered until the patient has recovered from the state of shock.

Fluid Intake. Fluid intake should be restricted to 20 ounces in twenty-four hours for the first ten days and then to 40 ounces for the next three weeks to prevent the formation of a hydraulic cast with resultant cerebral atrophy.

PROGNOSIS

A study of the temperature curve will often lend an aid in stating a prognosis. Blake, in 1927, stated that "If the temperature is at first subnormal and undergoes a rapid and progressive rise, the prognosis is unfavorable. If the temperature stays subnormal and you are unable after several hours by stimulation and hot packs, to elevate it, the prognosis is unfavorable; but if the temperature is at first subnormal, rises to normal and remains so, or if it rises to 101-102 degrees for a few days and then declines to normal the prognosis is good."

REVIEW OF CASES

Due to the courtesy of Dr. Walter D. Abbott, of Des Moines, I am permitted to give a critical review of thirty-three consecutive head injuries.

Table I

Mortality	21.6%
Dead in 8 hours	9.9%
Dead in 24 hours.....	6.6%
Bloody cerebral spinal fluid....	63.6%
Unconscious	84.87%

The patients who died within eight hours were so severely injured that treatment was futile.

Table II

Cases operated	12.1%
Middle meningeal hemorrhage...	1
Gross hemorrhage	2
Depressed fracture	2

The operative indication should not run as high as 12.1 per cent. In this series of cases an error in diagnosis was made. This occurred in two cases of gross hemorrhage both of which gave clinical signs of middle meningeal hemorrhage, but on exploration it was found that the temporal lobe

was lacerated and the middle cerebral artery severed.

Table III

Complications	12.1%
Osteomyelitis of skull.....	2
Epilepsy	1
Hemorrhagic arachnoiditis	2

Osteomyelitis of the skull resulted from extensive scalp lacerations which were badly macerated. A block resection of the infected bone was performed. Both cases above had no recurrence. The case of epilepsy, Jacksonian in type, on exploration revealed scar tissue in the parietal lobe. Resection of scar tissue with the electrosurgical unit was done. There has been no recurrence of attacks in nine months.

Of the two cases with hemorrhagic arachnoiditis, one on cerebellar exploration revealed a cystic collection of old blood in the cisterna magna. Drainage of the cyst was followed by recovery. The other case on exploration revealed a subdural hematoma which was removed, and further exploration revealed a collection of three ounces of old blood under the temporal lobe. The blood was drained and recovery followed.

SUMMARY

1. Injuries of the head produce shock which must be treated before other measures are taken.
2. A conservative plan of treatment is offered.
3. The mortality rate has slowly declined since this method of treating injuries of the head was adopted.
4. A critical review of thirty-three consecutive head injuries is offered.

820 Equitable Building.

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HYGROMA CYSTICUM COLLI

A Case Report with Review of the Literature*
CHARLES N. HYATT, M.D., Des Moines

Definition. An hygroma (moist tumor) is a congenital, cystic tumor of lymphogenous origin containing a clear, straw-colored, serous fluid, occurring in childhood, usually characterized clinically as a painless, fluctuating, nodular tumor, progressive as a rule in growth, appearing usually in the neck, and at times in the axilla or groin.

*Reported through the courtesy of Dr. O. J. Fay, Des Moines.

CASE REPORT

F. J. M., aged four years, entered the hospital March 12, 1932. The family history was essentially negative. The patient had always been in good health. In January, 1931, the mother had accidentally discovered a nodular growth in the right side of the neck, midway between the angle of the mandible and the clavicle, which was about the size of a hickory nut, freely movable and not tender. Since then it had gradually increased in size until immediately previous to entrance to the hospital it was the size of a hen egg, fluctuant and still freely movable. On the morning of March 12, the child awoke complaining of pain due to the tightness of his night clothes around his neck. It was noted then that the tumor was slightly larger than it had been. By noon it had nearly doubled in size, was quite painful and tender. The patient had a temperature of 103°. Dr. E. B. Winnett was called and recommended immediate hospitalization so that the boy could be under constant observation. By the next morning the mass had involved the entire right side of the neck. It was surrounded by an area of inflammation, was still fluctuant, very tender and was no longer freely movable. The temperature was 100.6°. From these findings a diagnosis was made of infection of an hygroma.

An operation was performed by Dr. Fay on March 13, under ethylene anesthesia. A vertical incision was made over the tumor. A large, thin-walled, multilocular cyst was removed, which was adherent to the surrounding tissues at the posterior and anterior triangles of the neck and which extended to the pleura and well up against the mastoid process. It contained a clear, serous fluid. There was no evidence of infection. The incision was closed with dermal sutures, an iodoform pack being inserted for drainage. This was removed the following day. Recovery was uneventful.

The pathologic report by Dr. Julius S. Weingart was as follows:

"The specimen consists of a tumor mass from the neck, measuring approximately 5 by 3 by 2 cm. Its gross appearance is that of a mass of loose connective tissue in which are several cystic collections of fluid. Histologic Diagnosis: Microscopic examination shows that the tumor is composed of fat and fibrous tissue with large cystic areas lined with endothelium. There are several areas of lymphocytic infiltration. There are also numerous polynuclear leukocytes scattered throughout the stroma. In places also the fibroblasts are quite large and there are many blood vessels, a histologic picture resembling granulation tissue. Diagnosis: Lymphangioma; hygroma cysticum colli."

The possibility of infection in this case cannot be ruled out, especially since the temperature range was 101° to 103° and the microscopic examination revealed the presence of a polymorphonuclear infiltration of the cyst walls. However, there were no gross evidences of infection at the operation, nor did the wound suppurate, in spite of the fact that a few of the cysts were broken during the course of the opera-

tion and their contents contaminated the entire field. No cultures were made.

In reviewing the literature, considerable difficulty was encountered in discovering not only the scattered case reports, but also important articles on the subject. The survey made, therefore, was as thorough as was practically possible, and the references incorporated in the bibliography. Altogether, sixteen reported cases of undoubted hygroma of the neck and axilla were found since Dowd's survey in 1913. A composite summary of the cases reviewed is herewith presented.

Incidence. Hygroma is a comparatively rare affection. In 1913 Dowd² obtained 137 cases from the literature, ninety-one being of the neck, thirty-five of the axilla and the remaining eleven general. Of these only eleven had been reported since 1900. He also reported four cases of his own. I was able to find only sixteen cases reported in American and English journals since 1913.

Etiology. The first appearance of an hygroma is most frequently in the first two years of life, and it is often present at birth. Comparatively few occur after the age of five years. However, two were reported in patients nineteen years of age, and one twenty,^{9 and 11} with a history of six to twelve months' duration.

The sex incidence is about equally divided, there being slightly more in males.

No other congenital defect was present in the cases reported.

Thompson and Keiller¹ in 1923 almost conclusively proved the following theory of origin to be true. In the six weeks' embryo the development of the lymphatic system is begun with the formation of the so-called lymph sacs, four in number, the first two located between the carotid and subclavian arteries, one on either side, the others in relation to the iliac arteries. The main outgrowths of the former form the lymph channels of the head, neck and arm; those of the latter, the lymph channels of the lower extremities and pelvis. The primitive lymph sacs later atrophy. Independent of this system, small islands of lymphoblastic cells are formed which also develop into lymph vessels, later joining with the larger system. This development very probably is occurring not only throughout intra-uterine life, but also during the first few years subsequent.

It is possible, from the above description, to conclude that hygroma may originate in the persistence of the primary lymph sac, an offshoot of the sac, or as a result of an island detaching itself from the rest of the lymphatic system. Its final development may be a few years after birth because its ancestral lymphoblasts were of the slower developing variety. It is possible for an hygroma to

develop in any region where the original lymphoblastic tissue is laid down. Clinically, however, it occurs most commonly in the cervical and axillary regions, rarely in the groin, and almost never elsewhere. When an hygroma involves deep structures of the neck or axilla, it is because lymphatic tissue was previously laid down in that region, and the cysts pushed their way out, rather than the peripheral cysts dissecting their way in. They followed the path of least resistance, which was outward.

Pathology. Lymphangiomata are of three types, simple or capillary, cavernous and cystic. All are probably congenital, and are interrelated; i. e., the cystic type probably having its origin in the cavernous, and so forth. The capillary type lies in the skin and subcutaneous tissues, is of small size, and offers little difficulty in diagnosis. The cavernous type consists of dilated, anastomosing lymph vessels which have lost their tubular condition. It varies much in size, rarely attaining a size larger than a split pea in the skin. Any part of the body may be affected, but most frequently the inner side of the thigh and the prepuce. The cystic type, or hygroma, consists of thin-walled cysts, lined with endothelium and containing a clear, serous fluid. It is usually multilocular and may attain very large size. The endothelium is made up of a single layer of cells having the appearance of a mosaic. There is no evidence of increased cell division, nor is there other evidence of malignant tissue. Any rapid increase in the size of the tumor is due to an increase in the lymph contained. In the neck these cysts are usually immediately lateral to the carotid sheath and anterior to the cervical nerve roots. They often extend down under the clavicle for a short distance, lying on the pleura. In one case reported by Dowd² the growth practically covered the left upper chest anteriorly. At operation the cysts lay beneath the pectoralis major, almost completely enveloping the pectoralis minor, and extending up under the clavicle into the neck, beneath the subclavian vessels. This is a typical description of an hygroma of the axilla.

Symptoms and Physical Findings. An hygroma is characteristically a soft, fluctuating tumor mass, lying in the anterolateral portion of the neck, usually midway between the angle of the mandible and the clavicle, or below. The size varies. It is usually that of a hickory nut or larger before discovered, although any size may obtain. The overlying skin is freely movable and is not edematous, no lymph stasis being present. Unless fixed by excessive size, the hygroma itself is freely movable. The rate of growth is extremely variable, sometimes remaining static for months or years,

and then increasing rapidly in size in the course of a week or two. In general, growth is slow and progressive, necessitating eventual removal. Any rapid increase in size is frequently preceded immediately by trauma or upper respiratory infection. Tenderness is usually absent, and when present, is mild. Pain was not present in the cases reported to date, save for one secondarily infected. The same was true of the author's case until the last twenty-four hours preceding operation, when pain and tenderness became quite severe. The highest temperature recorded was 100.8°. An afebrile course is the rule. In the author's case the temperature varied from 101° to 103° for the twenty-four hours preceding surgery, and subsided within the next twenty-four hours. The general condition of the child has been good in practically all cases reported, and there has been a uniform absence of other congenital defects.

Treatment. 1. Excision is the most logical and satisfactory treatment. Postoperative recovery is uniformly excellent, one death being reported due to shock incurred by a prolonged operation. Recurrence is the most common complication of this form of treatment. It is often extremely difficult to remove all of the tumor tissue.

2. Radium. One case reported by New⁷ of the Mayo Clinic is the only one reviewed in which radium was used. The size of the growth was markedly reduced. New suggested the use of radium in reducing the size of the growth preliminary to surgery.

3. X-ray probably has no influence. No literature concerning its use could be found.

4. Aspiration should be resorted to only for diagnosis. Removal of the cyst wall is necessary to prevent recurrence.

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STATE HEALTH COMMISSIONER'S PAGE

D. C. Stulsmuth, M.D.

Progress in
MATERNITY AND CHILD HYGIENE

The Bureau of Maternity and Child Hygiene of the State Department of Health and the medical practitioners of this state are working together to inform and instruct mothers of their needs before, during and after the baby's arrival. This is shown by the fact that 78.2 per cent of all requests for prenatal letters have come from physicians. Since May 1, 1932, these letters have been mailed only upon request of the physician of the patient's choice or with his knowledge and consent. The set comprises one letter to the prospective father and six to the mother-to-be. The letters have been revised and have been submitted to the Council of the Iowa State Medical Society for its consideration. The Commissioner has worked in the interest of organized medicine through the Council and desires to continue this partnership relation.

Naturally, the basic purpose of the letters is to indicate the need for medical and dental care and supervision begun early in the course of pregnancy and continued throughout the prenatal, delivery and postpartum periods. The mother is advised to take each letter to her physician so that he may give her additional information or advice or suggest changes which may be indicated by her condition. The mother is encouraged to obtain a complete physical examination (no description of or suggestion in regard as to what constitutes a complete physical examination is made) as soon as she has reason to suspect pregnancy and is urged to return to her physician without delay should her physician so advise. The mother is told that the physician of her choice is the only one who knows what is best for her. She is urged to

give him the opportunity to follow the changes which occur during her period of waiting in order that he may use the correct measures at the time they will do the most good.

According to the American Medical Directory, Twelfth Edition, 1931, 2,308 medical practitioners held memberships in the Iowa State Medical Society at the time of publication. When practitioners of all specialties except obstetrics, gynecology, or both, and pediatrics are subtracted from the membership, only 1,558 remain. It is reasonable to assume that most of these 1,558 members are more or less interested in obstetrics. At the present time 22.2 per cent of these men are allowing the bureau to cooperate with them. General practitioners have signed 64 per cent of the request blanks tabulated. More than half of all the obstetricians, gynecologists and those practicing both specialties in this state have cooperated. This service seems most appreciated by physicians who have expectant mothers under their care located in cities and towns of less than five thousand population.

More than 76 per cent of the sets of prenatal letters have been mailed to expectant mothers living in municipalities within this population group. Sets of prenatal letters for more than five women each have been requested by 38.1 per cent of the physicians. Requests have been received from 97 of the 99 counties.

The service is well received by the expectant mothers. They mail many letters of appreciation to the bureau. Written and verbal reports from medical practitioners who use this service most, indicate that it is beneficial to physicians and patients alike.

*"Instructions to mothers, especially primipara, becomes a privilege. To allay fears, to refute foggy stories, becomes a pleasure. Impress the normality of the pregnant state; dwell upon the happiness and joy of the coming event. Make of it a joyful period of expectancy."**

PREVALENCE OF DISEASE

Disease	June, 1932	May, 1932	June, 1931	Most Cases Reported From
Diphtheria	31	39	13	Polk, Pottawattamie
Scarlet Fever	158	158	237	Polk, Woodbury
Typhoid Fever	5	12	7	Webster
Smallpox	65	119	106	Dubuque, Woodbury
Measles	18	21	125	Johnson, Floyd
Whooping Cough	43	70	168	Black Hawk, Story, Woodbury
Cbs. Meningitis	2	3	0	Benton
Chickenpox	95	136	163	Woodbury, Black Hawk
Mumps	71	126	83	Page, Johnson
Tuberculosis	44	55	33	Scott
Undulant Fever	10	5	4	Jones
Syphilis	218	172	155	(For State)
Gonorrhea	301	228	238	(For State)

* Lloyd O. Hoffman, M.D. The Journal of the Iowa State Medical Society, July, 1932, page 311.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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MEDICAL EDUCATION—A FUNCTION OF THE STATE SOCIETY

"I swear by Apollo, the physician and Aesculapius and Hygeia * * * [that] I will impart a knowledge of the [healing] art to my own son and to those of my teachers and to disciples bound by a stipulation and oath according to the law of medicine, but to none others."

By the oath of Hippocrates we find, in the banding together of physicians by "a stipulation and oath," the foundation of the first medical association or society. It is of particular interest to note that in the words of Hippocrates this organization should be effected apparently for the sole purpose of instruction. Times have changed and medical practice has become much more complex. Today the physician is not only the advisor in matters of personal health, but he is also custodian of the public health, administrator of health laws, practitioner of preventive medicine and by no means least of all, a public spirited, civilly-minded citizen. Medical organization today involves much more than in the time of Hippocrates; in fact, we find in the present medical organization a considerable portion of the activities of the organized group directed toward those measures having to do with the control and maintenance of public health. This activity is considered administrative or legislative in nature as distinguished from that older and perhaps broader sphere of activities described as educational.

In the broad sphere of educational activities, times have brought changes and we no longer are content with imparting knowledge to our colleagues. Today much attention is appropriately given to the dissemination of medical information to the general public. In our own organization there are three distinct avenues of educational activities. The annual session each year brings to the members who attend a wealth of medical

information, both theoretical and applied, gleaned from the highest of medical sources and presented by men outstanding in their particular branches of practice. This meeting constitutes an intensive post-graduate course and is of inestimable value in keeping the profession of the state abreast of the newer discoveries in medical practice. Once each month the JOURNAL of the Iowa State Medical Society visits the office of each member of the association, bringing to him a series of original medical articles prepared by men who have devoted especial attention and study to the theme, a series of editorials dealing with medical problems and news concerning their fellow practitioners over the state. A newer, but no less valuable factor in the education of the profession, is the Speakers Bureau which has been created to bring educational contact at frequent intervals to every member of the state society.

From its inception as a bureau with a sole function to furnish speakers to the smaller and more dependent county medical societies, the bureau has grown to the point where it provides a series of post-graduate lecture courses of the highest order, furnishes programs for district or county medical societies, provides for exchange programs, sponsors and operates a radio broadcast—devised for the instruction of the public in medical matters—and conducts a news service disseminating health information through the daily press. This bureau in furnishing programs serves both the audience and the speaker. In the one instance, the audience profits by the thoughtful debate of a medical problem by one who, because of his unusual interest, has devoted special attention or time to the particular phase of medicine discussed. In the other instance, the speaker is permitted to develop and discuss his thoughts relative to medical problems and in doing so, crystallizes and matures his own studies. But the benefit of this contact does not end here. As a small portion of yeast leavens the entire lump, so will the trained physician in his community elevate every member of the profession. Further, it is impossible to conceive of a physician devoted to his studies and the advancement of his chosen profession, who would not, because of his more complete information, add materially to the effectiveness of a program of preventive medicine in his particular community. Such a physician will be sought as a guest speaker for many lay organizations. It is true that in performing his duties, he will receive criticism. His less talented or less ambitious colleague will perhaps assume a "holier than thou" attitude and point the finger of suspicion at such a doctor, impugning his motives, and discrediting his efforts. No pioneer, however, has trodden his trail of exploration without criticism.

or censure. Lulled by self-sufficiencies or embittered by failure, a physician might assume a near-sighted attitude toward the effort of any person or agency furthering an educational program. He might criticize the visiting speaker for flaunting himself or his ability before his audience. He might criticize the clinician for discussing before the patient the peculiarities of his disease. He might be charged with attempting to lure the patient from the local physician to clinics or remote medical centers. Such a critic, however, if he did not lack perspective, would appreciate that the efforts of the lecturer or clinician were toward the improvement of medical practice in the particular locality visited and that as medical experience was improved in the particular location, so there would be less incentive to the patient to seek medical aid in a more remote clinic. In instances of this sort, about all it ever takes to convert a knocker to a booster, is to allow such a man to occupy the center of the stage.

If the educational activities of the State Society are worth while; if the Annual Session, the JOURNAL, and the Speakers Bureau are valuable to the medical profession in Iowa, then let's all be boosters. If these activities are not worth while, let's still not become knockers but as a dutiful parent to a wayward child let us then apply the rod of correction and bring up the child in the way he should go.

THE PROBLEM OF HEALTH INSURANCE

It is alleged that some twenty to thirty per cent of the sick in the United States today are not receiving adequate medical care. If such a statement is correct, some form of compulsory health insurance is almost certain to be adopted to care for these people. Medical economists everywhere have considered this possibility and in the literature of today will be found many excellent discussions of the matter.

Simons and Sinai* have just completed a two years' investigation of the systems of health insurance operating in eight of the leading European countries. It is their belief that the social, economic and political conditions that led to the enactment of health insurance laws in all of the leading European countries are now present in the United States, and the pressure for this relief measure is increased.

It is particularly interesting to review the development of their present health insurance laws, since this review carries a very timely warning to American physicians.

In France, after the insurance law had been

devised, had been introduced into the Chamber of Deputies, had received full discussion and had finally passed this body, the physicians and dentists united in an attack on it and held up its enforcement for two years. During this time, the law was virtually rewritten, so that features favorable to the professions were included in its final form. Under the French health laws, the relation between practitioner and patient is virtually the same as in private practice. The patient has free choice of practitioner, the practitioner fixes his own fee and the insured presents the practitioner's bill to the insurance organization and is reimbursed with a percentage of it, usually eighty per cent.

Germany has forty-four million insured individuals according to their statistics. Eighty-five per cent of all physicians give part or full time to insurance practice. A small group have a wealthy, non-insured practice. The rest starve—or practically so—especially the recent graduates who usually have to wait five to seven years to get into insurance practice. The insured gets both medical and dental service free, and the family of the insured also receives the benefit.

Great Britain has about sixteen million insured, and any registered physician or dentist can require the insurance committee to put his name on the panel list, from which the insured makes his choice. This panel list is posted in a public place. The British system differs from the German in the further respect that specialists' services are not included. The medical service is, as far as practical, divorced from the social management that determines whether cash benefits shall be paid.

Broadly viewing insurance in action in numerous countries, three important points are outstanding. First, notwithstanding the many faults and deficiencies of the various systems, no country that has ever tried compulsory health insurance would be willing to go back to preinsurance days. Second, insurance practice is generally conceded to have increased the average professional income. Third, it has not apparently improved public health nor diminished death rates nor time lost in industry on account of sickness.

The conflict between the medical profession and the law is due to the fact that health insurance always has been, and probably always will be, more poverty insurance, more poor relief than medical relief. It has its origin in a social need. Its cash benefits are a fundamental part of the system and take the place of the pay envelope when sickness interrupts earning power. Social workers are largely responsible for the agitation for health insurance and for the formulation of its regulation. Politics also play an important

*The Way of Health Insurance, by A. M. Simons and Nathan Sinai, 1932; price \$2.00. The University of Chicago Press.

part. Certainly the individual to state without qualifications that "I am against health insurance," or "I am for health insurance," is speaking either out of great depths of ignorance or from great heights of prejudice. There is not one health insurance but many, and each has a multitude of features—some good and some bad.

With the shadow of health insurance crossing our paths, it behooves every physician to investigate and carefully weigh the advantages and disadvantages of the system.

DISEASES CAUSED BY THE FILTRABLE VIRUSES STUDIED BY MEANS OF THE BACTERIOPHAGE

Among the newer discoveries in bacteriology there is none perhaps which has seemed to possess the potentialities for therapeutic usefulness of the bacteriophage phenomenon. Following the incidental observation of its action by Twort in 1915, much attention was directed to the phenomenon by a group of investigators headed by d'Herelle. They conducted numerous experiments demonstrating many of the biologic characters of the bacteriophage and indicating in general its scope of usefulness as a therapeutic agent. While the form of the organism concerned in this phenomenon has not yet been settled and two schools exist regarding its exact character, the d'Herelle group has offered much evidence to the effect that the agent is a living organism—an ultra-microscopic filter-passing virus.

Information gleaned from a study of this phenomenon has recently been ingeniously employed by Dr. Merl E. Colvin of Yale Medical School in the study of the transmissibility of certain communicable diseases. For many years it has been taught that communicable diseases were transmitted by droplets of moisture expelled from the respiratory tract and carried a limited distance in the air. To explain a more remote transmission of the organism, we were told that the micro-organism is deposited on floating particles of dust and carried by air current. This mechanism seems to have been well proved for many of the ordinary bacterial diseases caused by the larger organisms. For that more interesting group of diseases which have been thought to be caused by filtrable virus, however, little exact information relative to the mechanism of their dissemination has been demonstrated since, in many instances, the infecting organism has not been studied and is considered to be an ultra-microscopic bacterium because of its habits. According to Dr. Colvin, the viruses causing measles and chickenpox approximate in size the bacteriophage and since the bacteriophage is comparatively easy to handle, this agent may be

used as a test substance in the study of the spread of the disease-producing viruses. Dr. Colvin has been able to measure the distances to which the bacteriophage may travel through the air and the speed at which it travels. He has determined that the presence of dust is not essential in this dissemination, since he has shown that the virus may travel as much as 35 feet in five minutes' time and has further demonstrated that the bacteriophage which he had used in his studies lurked in the dust of his room for at least eighteen days. After a thorough sweeping and mopping of the room there was much of the virus in the air; in fact, the amount seemed to be greater than before. This interesting observation indicates the ineffectiveness of this method of disinfection and would seem to discredit the modern methods of room cleaning.

By this interesting series of experiments, it appears by analogy that Dr. Colvin has rather definitely established the fact that diseases such as chickenpox, measles and perhaps others caused by a transmittable virus are likely air-borne diseases behaving in every respect as the bacteriophage of his studies. From these observations, one cannot but wonder if the size of the infecting organism may not bear a very close relationship to its contagiousness and the degree of intimacy in contact required for the transmission of a particular disease from one individual to another.

BUREAU OF MATERNITY AND CHILD HYGIENE

The Iowa State Department of Health added a Bureau of Maternity and Child Hygiene to its organization July 1, 1931. The services which this bureau offers have been available to the practicing physicians of the state since December 9 of the same year. On this date, the Council of the Iowa State Medical Society unanimously indorsed the plan of the bureau and recommended that medical practitioners lend their assistance and co-operation in the application of the plan to local conditions. The plan of the bureau meets the basic objectives of child health work. These basic objectives are to give every child: His birth-right of a sound mind in a sound body; such care and training from birth through adolescence as will make possible his highest mental and physical development; such care and training in health habits as will enable him to care for his own health and eventually to care for and train his own children.

The entire plan of the bureau is for *educational work*. The initial work of the bureau will be to provide authentic information and instruction to expectant and prospective mothers. The bureau furnishes this information by three methods. This

information is intended to augment but not to take the place of medical care and supervision. In fact, the basic purpose of the educational work is to indicate the needs for medical and dental care and supervision begun early in the course of pregnancy and continued throughout the prenatal, delivery and postpartum periods.

The bureau proposes to cooperate with practicing physicians to help them instruct and inform expectant mothers in regard to their needs. The director of the bureau believes that every practicing physician will wish to request a set of prenatal letters for every expectant mother under his care. Naturally, the information which the prenatal letters contain concurs with the consensus of leading obstetricians. The letters give authoritative information on the hygiene and minor discomforts of pregnancy; the need of medical and dental care and supervision; the preparation of the layette and other articles needed for the care of the baby and the preparation necessary for confinement. At the present time the bureau furnishes addressed stamped envelopes to those physicians who request sets of letters for mothers under their care. A maximum of ten cards may be mailed in one envelope without additional postage. The request cards and the addressed stamped envelopes will be forwarded to any physician upon written request.

The physicians of the state are cooperating with the Bureau of Maternity and Child Hygiene of the Iowa State Department of Health. This is shown by the fact that 65.1 per cent of the requests for prenatal letters have come from them. Of the requests made by physicians, general practitioners have signed 64.4 per cent, obstetricians 20 per cent, surgeons 7.8 per cent and practitioners of six other specialties the remaining 7.8 per cent. Physicians practicing in 92 of the 99 counties have sent in requests for letters. Twenty per cent of all the physicians in the state listed as obstetricians, gynecologists and obstetricians and gynecologists are cooperating.

The New York State Department of Health began a similar service for expectant mothers under the care of physicians in March, 1930. Requests for 1,096 sets of letters were received by the New York State Department of Health in ten months.

The Minnesota State Department of Health has had a Bureau of Maternity and Child Hygiene in its organization since 1922. During 1931, 1,173 requests for prenatal letters were received.

The physicians of Iowa are to be congratulated for the splendid progress which the Bureau of Maternity and Child Hygiene of the Iowa State Department of Health has made since December, 1931. In a little less than four and one-half

months, the total number of requests received for prenatal letters is greater than the figures cited above for New York State or Minnesota. For the past six weeks, the number of requests made has represented 13.6 per cent of the total number of live births registered each day in the entire state.

Doubtless, many physicians who have expectant mothers under their care will wish to provide this information for their mothers. A sample set of the letters, request cards and stamped addressed envelopes may be obtained by writing to the Iowa State Department of Health, Des Moines.

ANNUAL SURGICAL CLINICS, IOWA CITY, SEPTEMBER 6-9, 1932

The annual surgical survey course for post-graduates will be presented by members of the faculty of the College of Medicine, State University of Iowa, September 6th to 9th, inclusive. The course is arranged by the Extension Division of the university and applications will be accepted in the order received. A fee of ten dollars is charged for the course. Following is an outline of the program:

Tuesday, September 6th

Gynecology

- 8:30-12:00—Non-Operative and Operative Treatment of Pelvic Inflammatory Disease.
Postmenopausal Bleeding in its Relation to Cancer.
The Fibroid Uterus.
Operations.

Dr. E. D. Plass and Staff.

Genito-Urinary Surgery

- 1:30-5:00—The Kidney, Pelvis and Ureter in Pregnancy.
Renal Tuberculosis.
Unattached Retroperitoneal Tumors.
Transurethral Prostatic Resection.

Dr. N. G. Alcock and Staff.

Wednesday, September 7th

Otolaryngology

- 8:30-12:00—Diagnosis and Treatment of Diseases of the Ear, Nose and Throat from the Standpoint of the General Practitioner.
Ward Rounds.

Dr. D. M. Lierle and Staff.

General Surgery

- 1:30-2:00—Chronic Empyema, Causes and Treatment.
2:00-3:15—Surgical Ward Walk.
3:15-3:45—Roentgenologic Diagnosis of Peptic Ulcer.
3:45-5:00—Surgical Ward Walk.

Dr. H. L. Beye.

Dr. F. R. Peterson.

Dr. W. H. Gibbon.

Dr. O. R. Hyndman.

Thursday, September 8th

General Surgery

8:00-10:00—Operations—General Hospital.

10:00-10:30—Supracondylar Fractures of Humerus.

Dr. G. C. Blome.

10:30-11:00—Spina Bifida.

Dr. O. R. Hyndman.

11:00-12:00—Surgical-Pathologic Demonstration.

Dr. G. H. Hansmann.

1:30- 2:00—Fractures of Both Bones of Forearm.

Dr. D. H. Brown.

2:00- 3:15—Surgical Ward Walk.

Dr. H. L. Beye.

3:15- 3:45—The Treatment and Sequelae of Burns.

Dr. C. N. Cooper.

3:45- 5:00—Surgical Ward Walk.

Dr. G. C. Blome.

Friday, September 9th

General Surgery

8:00-10:00—Operations—General Hospital.

10:00-10:30—Complications of Thyroid Disease.

Dr. F. R. Peterson.

10:30-11:00—Irradiation Therapy of Bone Neoplasms

Dr. H. D. Kerr.

11:00-12:00—Surgical-Pathologic Demonstration.

Dr. G. H. Hansmann.

Orthopedic Surgery

1:30- 5:00—Chronic Osteomyelitis, Treatment and Complications.

Rupture of the Supra-Spinatus Tendon and Surgical Repair.

Discussion as to Cause of Shoulder Disability.

Painful Heel, Spur of the Os Calcis, Treatment.

Sciatica, Treatment; Significance of Bilateral Radiation.

Hyperparathyroidism, Case Presentation.

Flexion Contracture of the Knee.

Treatment of Old Fracture of the Neck of the Femur.

Spondylolisthesis and Separate Neural Arch as Mechanical Causes of Low Back Pain.

Malta Fever Spondylitis, Case Report.

Erosion and Ligation of the Femoral Artery, Case Report.

Dr. J. Kulowski and Staff.

COURSE IN TROPICAL MEDICINE AT TULANE

Announcement is made of a special three months intensive course in tropical medicine to be given in the department of tropical medicine, Tulane University of Louisiana. The course is intended for public health officers who are graduates of medicine, physicians who intend to practice in the tropics, medical missionaries, physicians especially interested in the diseases of warm climates or in human parasitology, and for senior medical students who are well qualified and are properly recommended by their schools.

THE OPEN FORUM

Editor Journal Iowa State Medical Society:

I had it in mind, during the sittings of the House of Delegates, to express my views on the perennial subject of fee bills, but the Medical Economics Committee, in its report, seemed to discourage any discussion of that item for the present. The Secretary's Bulletin, of this date, however, indicates that the committee is struggling with something for future recommendation; and that offers me the needed loophole for a suggestion for their guidance.

For a matter of fifty-seven years I have had knowledge of fee bills, and fee bills, but none that was respected by any considerable number of those who voted for its adoption; and it has occurred to me that the weak spot was to be found in the minimum wage that had no economic basis, a definite recognition of the patient's ability to pay.

The man who earns but \$50.00 per month cannot pay as much for a given service (obstetrics, appendicitis, pneumonia, strangulated hernia, mastoid, tonsillectomy, cataract, etc.) as the one who earns \$100.00 per month; nor the latter as much as one who earns \$150.00 per month, and so on up the scale of income. In a purely academic sense, the man who would thus be charged the lowest fee gets as much profit (in terms of satisfaction) from successful service as the one charged the maximum. Practically, however, the difference is great, in that rehabilitation means so much more to the one with large earning capacity, and quicker recoupment of losses while off duty.

Such a step-up system of minimum fees should be credited with three (at least) good features: First, it would make unanimity possible among physicians; second, it would strike the average patient as reasonable; and third, it would save the self-respect of the small-means, honest man, whose contribution, added to the extra pay from the well-to-do, would make possible a decent average return from all classes, with easier collections.

If it is proper to scale war debts on the ability to pay, it should be proper to likewise scale sickness debts; and we should certainly not overlook the mutual bearing on the production of pauperism.

H. B. YOUNG, M.D., Burlington.

HOSPITAL SERVICE FOR THE MIDDLE CLASS

A new unit of the Mount Sinai Hospital in New York City has recently been opened for the care of the middle class patients. It has been said that in America today only the very rich or very poor receive superior medical attention. It is the project of this hospital to offer a superior service to the patient who is able to pay a reasonable, but not an elaborate fee. Hospital care and medical and surgical treatment will be offered at about one-half the usual cost. Rates will run from \$35.00 to \$45.00 a week. Sacrifices on the part of donors, nurses and physicians will make the experiment possible.

SPEAKERS BUREAU ACTIVITIES

POST-GRADUATE WORK

The idea of extension post-graduate work has quickly gained in popularity among the physicians in Iowa since its inauguration a few years ago. Since the fall of 1929 it has developed from an innovation into a regular activity and service of the state medical society.

The College of Medicine of our state university first offered extension courses in the fall of 1929 in two places in the northern part of Iowa. Eighty-three doctors enrolled for the courses and were so well pleased with the work that doctors in other localities became interested in the plan. With the establishment of the Speakers Bureau the following year, this activity came within the scope of its educational program and has been sponsored by it since then. That year two courses, one in internal medicine and one in obstetrics, were offered in five centers in northern and central Iowa and over 180 doctors took advantage of this opportunity to brush up on certain branches of medicine.

In the fall of 1931, the Speakers Bureau and the College of Medicine again offered two courses, one in internal medicine and one in surgery in five centers in the western and southern sections of the state. Again nearly 180 doctors enrolled for the work.

The enthusiastic reports of these 450 doctors have created an unusual demand for these courses and this year requests have come in from nine different localities, indicating the desire of the physicians for this work. In order to give equal opportunity to the members in all parts of the state, however, the Bureau felt it best to offer the work this fall in the section of the state which has not yet had it—the eastern part. The courses this year are to be one on surgery for the general practitioner and a combined course on pediatrics and obstetrics.

In spite of the increasingly heavy load which every member of the faculty of the College of Medicine has had to bear during the past two years, they are always willing to cooperate to the fullest extent in making this work a success. The only remuneration the University asks is the payment of the traveling expenses of the lecturers.

Any doctor in the eastern part of the state who is interested in the courses which will begin the last part of September, should get in touch either with the Bureau or with his councilor to find out the definite plans for the work.

LAY EDUCATION

So far, in its lay education program, the Bureau has sent speakers to Rotary Clubs, Kiwanis Clubs, Lions Clubs, Chambers of Commerce, Parent-Teacher Associations and to various women's clubs. The next step in the program is to reach the younger groups—those in high school and college.

The Bureau has been asked to arrange a series of

health talks to be given during the chapel periods at Drake University, beginning shortly after the opening of school, late in September. The following subjects are to be discussed:

The Oath of Hippocrates
Romances in Medicine
Medical Research in North America
The Sex Life
Insurance That Actually Insures
Periodic Health Examinations
Mental Hygiene
Diets
Rheumatic Diseases
Tuberculosis
Simple Rules of Health
Cancer
X-ray and Radium

A shorter series of talks are to be given in a couple of the high schools in Des Moines, early in the fall. The subjects of the talks will include some of the following:

Hippocrates—Beginnings of medicine.
Pasteur—Conquest of infectious diseases.
Lister—Development and accomplishments of surgery.
General Gorgas—American conquest of tropical diseases.
Ehrlich—Contribution of chemistry to medicine.
Rockefeller—Improvement of world health—research.

It is felt that these two schedules are very important steps in the development of the lay education program of the state medical society and it is hoped that we can carry out similar plans in the other colleges and high schools throughout the state.

RADIO TALKS

The August broadcasts are part of a series of six talks being given by the Bureau of Maternal and Child Hygiene of the State Department of Health. Upon the conclusion of this series, on August 26, the following talks will be broadcast:

WOI—Friday—4:00 P. M. WSUI—Thursday—8:00 P.M.

Poliomyelitis
Goitre
Mental Hygiene
Arthritis
Anemia

The director of station WSUI at Iowa City recently wrote the Bureau that the health talks broadcast by the Iowa State Medical Society were very favorably received and that they would be glad to continue our period on the air. Station WOI has also continued our period with them. The Society is indebted to the courtesy of these stations in affording the opportunity to broadcast these important health messages.

SOCIETY PROCEEDINGS

Black Hawk County Annual Meeting

Dr. A. A. Hoffman is the newly elected president of the Black Hawk County Medical Society, being named to that office at the recent annual meeting of that organization. Other officers are: Dr. Burr C. Boston, secretary, and Dr. Howard J. Hartman, treasurer. All officers are of Waterloo.

Boone-Story Annual Picnic

Tuesday, June 21, the Boone and Story County Medical Societies had a joint steak fry at Council Rock in the Ledges State Park. Thirty-four doctors enjoyed the picnic at which Dr. W. W. Bowen, of Fort Dodge, president of the state society, and Dr. Robert L. Parker, of Des Moines, secretary of the state society, were guests.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held Thursday, July 21 at "The Meadows," Woodward, Iowa. Walter D. Abbott, M.D., of Des Moines, presented an illustrated lecture on Injuries of Brain including Traumatic Epilepsy. T. W. Blake, M.D., assistant superintendent of the institution at Woodward, presented four case reports, which were discussed by P. W. Beckman, M.D., of Perry. S. C. Kincheloe, Ph.D., professor of sociology at the University of Chicago, closed the afternoon's program with a paper on Human Relations. A picnic supper followed the program.

Linn County

The Linn County Medical Society has announced most of the topics and lectures for the rest of this year and next. The programs will be held in the Hotels Montrose and Roosevelt alternately, with a complimentary dinner at 6:30 and program at 8:00. Members of the state society are cordially invited to attend any or all of these lectures and to take part in our meetings. We thus hope to maintain the most friendly relations between our society and our fraternal neighbors throughout the state. The following is the tentative schedule:

September 8—Nathaniel G. Alcock, M.D., of the University of Iowa, One Year's Experience with Transurethral Prostatic Resection.

September 29—R. A. Stewart, M.D., giving at Independence a clinic on Psychiatry and Insanity.

October 13—Louis W. Sauer, M.D., of Chicago, Feeding Problems, including Pyloric Stenosis in Infancy, Anorexia in the Tottler, and Malnutrition in the School Child.

November 10—Adolph Sachs, M.D., of Omaha, Agranulocytic Angina.

December 8—George W. Crile, M.D., of Cleveland, A New Conception of, and a New Method of Treat-

ment for, Neurocirculatory Asthenia and Peptic Ulcer.

January 12—Joseph L. Baer, M.D., of Chicago, The Cervix During Pregnancy, Labor and Postpartum.

February 9—William R. Cubbins, M.D., of Chicago, subject to be announced later.

March 9—Eye, ear, nose and throat program.

April—No program.

May—Program on skin, lecturer to be announced later.

Thos. F. Hersch, M.D., Secretary.

Van Buren County

Members of the Van Buren County Medical Society met in Keosauqua, Monday, July 4, and Bernard Webb, M.D., son of Dr. and Mrs. J. W. Webb, of Bonaparte, and a recent graduate of DePauw University, delivered a lecture on Carbohydrate Metabolism.

New Officers for Austin Flint-Cedar Valley Medical Society

Dr. E. F. Stevenson, of Waterloo, was elected president of the Austin Flint-Cedar Valley Medical Society, succeeding Dr. Bruce Ensley, of Shell Rock. Dr. M. N. Gernsey, of Waverly, was named vice president, and Drs. C. C. Hall, of Maynard, and W. E. Long, of Mason City, were re-elected secretary and treasurer, respectively.

Iowa-Illinois Central District Meeting

Thursday, July 14, the annual meeting of the Iowa-Illinois Central District Medical Society was held at the Davenport Outing Club, and the following program presented: George Braunlich, M.D., of Davenport, President's Address; John F. Ritter, M.D., of Maquoketa, Nascent Endocrine Therapy; John H. Peck, M.D., of Des Moines, Childhood Tuberculosis; E. Starr Judd, M.D., of Rochester, Surgery of the Biliary Tract; and Fred M. Smith, M.D., of Iowa City, Certain Aspects in the Treatment of Cardiac Failure.

INTERESTING NEWS

In Brief

A report by the federal bureau of health in Germany reveals that charlatans, that is unlicensed persons who treat patients as their regular occupation, shows an increase of 4.3 per cent over previous years and that this figure has grown steadily during the period of their investigation which covers the years since 1876.

The Medical Society of New Jersey has set up a committee to limit the designation of specialists to physicians scientifically qualified to assume it. The

Society will provide an examining board to determine the suitability of candidates for this designation.

Two University of Iowa alumni, now residents of Los Angeles, have been named to the staff of physicians who will serve at the International Olympic Games at Los Angeles. They are Dr. H. L. Van Meter and Dr. Walter R. Fieseler.

The government of Yugoslavia is reported to have decreed that all medical advertising must be scrutinized by the Permanent Expert Council of the Ministry of Social Welfare and Public Health before it can be placed in newspapers and magazines.

A recent report from the New Jersey State Hospital indicates that half of the patients in the hospital for mental disease owe their illness to definite changes in the tissues of their brains brought about by chronic infection of a focal character.

Accommodations are provided at the University of Iowa College of Medicine for some eighty-five to one hundred students in the freshman class. Preference will be given to residents of Iowa, but non-residents may secure admission to fill vacancies.

A new method of preserving the bodies of dead persons has been developed which, it is reported, will prevent decay for an indefinite time—probably years. The process involves the dehydration of the body and the infiltration of the tissues with paraffin.

A recent statement credited to Dr. Simon Flexner is to the effect that the virus causing infantile paralysis enters and leaves the brain cavities through the membranes of the nose and passes along the olfactory nerve to the brain.

A definite increase, especially among very young people in alcoholic mental disease has been observed by Dr. Frederick W. Brown, director of the Department of Statistics of the National Committee for Mental Hygiene.

The United States National Institute of Health has developed a new vaccine which promises to give protection against the epidemic typhus fever of the United States.

It has been proved with reasonable certainty that five cases of malaria in San Francisco were due to infection by the syringe of a narcotic drug addict who had malaria.

In spite of the fact that pellagra is considered a disease of privation, during the present period of economic depression the disease has shown a sharp decrease in mortality.

PERSONAL MENTION

Dr. A. R. Fredrickson, city health physician of Lansing, was the speaker at the regular meeting of the Kiwanis Club, Monday, June 20, reviewing health conditions in Lansing during the past year.

Dr. Isaac Sternhill of Council Bluffs, left about the first of July for New York City, where he has enrolled for a two months' postgraduate course in pediatrics at Columbia University. Upon his return to Council Bluffs in September, Dr. Sternhill expects to limit his practice to pediatrics.

Dr. Charles D. Fenton is now associated with Dr. C. D. Shelton in Bloomfield. Dr. Fenton just recently completed his internship at the Foote Memorial Hospital at Jackson, Michigan, after his graduation in 1931 from the State University of Iowa College of Medicine.

Dr. J. E. Luckey, practicing physician of Vinton for thirty-five years, is now at Iowa City in the University Hospital, where he is undergoing treatment. Dr. Luckey has been in ill health for some time and a few weeks ago was taken severely ill with gall-bladder trouble and complications.

Dr. Frederick H. Roost, eye, ear, nose and throat specialist of Sioux City, was one of the speakers at the annual session of the South Dakota State Medical Society, held in Watertown, June 21. Dr. Roost spoke on "Acute Sinus Disease and Its Conservative Treatment."

Dr. J. M. Kerwick, formerly of Lawler, has moved with his family to New Hampton, where he expects to open offices in the New Hampton Clinic.

Dr. J. W. Eckstein of Central City, who for several months has been absent from his office because of illness, has announced that he will resume the practice of medicine and surgery immediately.

Dr. Harry H. Lamb of Davenport, was elected vice president of the Iowa-Illinois Central District Medical Society, at the recent meeting of the organization held in Davenport.

Dr. Henry S. Houghton, dean of the College of Medicine at Iowa City, has returned from a year's trip abroad during which time he spent three months each in India and China and two months in Japan.

Dr. Howard G. Beatty, son of Dr. A. S. Beatty of Creston, has become associated with his father in the general practice of medicine. Dr. Beatty, who was graduated from the State University of Iowa College of Medicine, has been serving his internship at the Salt Lake City, Utah, general county hospital.

Dr. Giles C. Moorehead of Ida Grove, spoke before the Woodbury County Pioneer Club, June 25, on the

history of early pioneer days in Iowa and especially Ida County.

Dr. Harold Noble of Fort Madison, physician at the state penitentiary for five years, resigned recently and the state board of control has appointed Drs. R. L. Feightner and R. S. Reimers to fill the position.

Dr. Jesse S. Coontz, formerly of Garden Grove, has moved his offices to Leon, after having practiced medicine at Garden Grove for twenty-three years.

Dr. A. A. Johnson of Council Bluffs, has been reappointed to the state board of medical examiners, according to an announcement issued by Governor Dan W. Turner, Thursday, June 30.

Dr. John B. Kessler, head of the dermatology department of the state university, is still in a critical condition at the University Hospital, according to late newspaper reports. He has been confined to the hospital for several weeks, suffering from gangrene of the leg contracted during his recovery from pneumonia, and until recently had showed marked improvement. However, complications have occurred and his condition is now considered serious.

Dr. A. E. Montgomery, a graduate of the State University of Iowa College of Medicine, is coming from Washington, D. C., to Valley Junction, where he is establishing himself in the practice of medicine and surgery. While in Washington, Dr. Montgomery was connected with the Gallinger Municipal Hospital.

Dr. A. L. Hageboeck was re-elected president of the Davenport Municipal Art Gallery at the annual meeting of the board of trustees of that organization held recently. Dr. Hageboeck has been head of the institution since it was started, and with his election this month, will begin his seventh year of office.

Dr. E. W. Sproule of Humboldt, who for several years was secretary of the Humboldt County Medical Society, has been forced to give up the active practice of medicine on account of a serious heart condition.

Dr. J. E. McFarland, formerly of Ames, purchased the office equipment and practice of the late Dr. B. L. Eiker, and arrived in Leon about the first of July, coming direct from San Diego, California, where he has just finished his internship.

Dr. H. R. Sugg of Clinton, has been appointed by Governor Dan W. Turner, as a member of the state board of health to succeed the late Dr. C. T. Lesan of Mt. Ayr.

Dr. John H. Peck of Des Moines, who for the past

fourteen years has been president of the Iowa Tuberculosis Association, was honored by being named president of the National Tuberculosis Association at a recent meeting of that organization in Denver, Colorado.

MARRIAGES

The marriage of Miss Jennie Bell Ketchum of Riceville and Dr. F. W. Lee of Osage, took place at the home of the bride in Riceville, Tuesday, July 12. Dr. and Mrs. Lee left immediately for a ten days' trip into northern Minnesota and Canada, after which they will be at home in Osage, where Dr. Lee has practiced for the past eight years.

Saturday, June 18, in Caldwell, Idaho, Miss Ruth Clare Galligan became the bride of Dr. James T. Stanton, of Chariton. A reception at the Galligan home followed the ceremony, after which Dr. and Mrs. Stanton left by motor car for a trip through the Black Hills of South Dakota and a vacation in Minnesota before coming to Mount Ayr, where Dr. Stanton has just recently entered the practice of medicine.

DEATH NOTICES

Lesan, Cassius T., of Mount Ayr, aged fifty-eight, died July 9, after a long illness. He was graduated in 1897 from Rush Medical College and at the time of his death was a member of the Ringgold County Medical Society.

Letourneau, Phillip H., of Waukon, aged seventy-one, died July 13, after an illness of several months. He was graduated in 1881 from Northwestern University College of Medicine and had long been a member of the Allamakee County Medical Society.

Loomis, Milo Mason, of Manilla, aged fifty-eight, was instantly killed July 17, when the car he was driving crashed into a railway underpass. He was graduated in 1897 from Rush Medical College and at the time of his death was a member of the Crawford County Medical Society.

McKinley, Alexander Daniel, of Des Moines, aged fifty-six, died suddenly at his home, July 9. Death is believed to have been caused by a heart attack. He was graduated in 1906 from Rush Medical College and at the time of his death was a member of the Polk County Medical Society.

NOBEL PRIZE IN MEDICINE

Otto H. Warburg of the Kaiser Wilhelm Institute of Berlin has been awarded the Nobel prize in physiology and medicine for 1931 for his studies on cellular respiration. He found that respiration is possible only in the presence of iron carried by a definite enzyme.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

Memories of Early Life in Lucas County*

TOM MORFORD THROCKMORTON, M.D., Chariton

I was born in 1852 in Green county, Pennsylvania, as were my parents, John and Nancy E. (Lazear) Throckmorton. My father was in general merchandise trade in Waynesburg, Pennsylvania. His health failing he was advised by physicians to go west. When a young man he had visited in Iowa and liking the country he came to Chariton in the fall of 1854, when Chariton was a new land office and purchased several hundred acres of land in Warren and Union townships.

Returning to Pennsylvania and closing out his business, he made preparations to move to Iowa. In the early spring of 1855, he returned to Iowa with stock wagons, implements via steamboats down the Ohio. His brother, Morford Throckmorton and family—three boys—and Michael Lazear, my mother's brother, a single man, came with him.

They put up a small round log cabin for the family of his brother, Morford. Then father built a double log house, two stories in height of hewed oak logs. It was a monstrous affair for Lucas county—two rooms downstairs sixteen by sixteen feet in the clear. The rooms were the same size upstairs only the ceiling was not so high. The roof was of oak shingles. A brick chimney and fireplace, sawed oak floors, dressed and matched were other features. He planted sixty acres of sod corn, fenced his land, built stabling for stock, etc. His brother, Morford and family, and mother and brother, Michael Lazear, remained in Iowa looking after stock through the winter of 1855-56, one of the severest winters known in Iowa history.

In the month of March, 1856, two four horse wagons followed by a single team—this wagon contained the family, mother and three boys, were seen winding down a steep hill in the southwest county of Pennsylvania and entering a fork of Wheeling Creek, following the stream for several miles, the water averaging in depth about one foot; finally, the teams emerged from the stream and commenced the

ascent of a steep hill. After one wagon arrived at the top a team was unhitched and brought back to help another wagon up; after frequent struggling up steep hills and miry places the emigrants arrived at the wharf in Wheeling, Virginia, and took passage on the steamboat "Lady Bell" down the Ohio river for that far away country called "Ioway."

I saw many things going down the Ohio river, the "Crystal Floating Palace," a pleasure boat with chime bells suspended all around the top; the "Kentucky Giant," who would arise from his chair, stand a moment, and then take a collection of money. At one place where the river was full of crafts, small boats and skiffs, the younger brother called out, "O, see the young boats" which caused a general laugh.

After several days steaming down the Ohio to its mouth, then up the Mississippi, they came to a very small town known as "KirKirk." Now, everybody calls it Keokuk.

Here, these emigrants landed. The wife and three boys took the stage for Chariton while the father, who had shipped horses and wagon, loaded up as much household goods as his team could well haul, leaving the rest in storage and followed his family. By the way, when he returned to Keokuk for his goods, much of it could not be found. It had been stolen or appropriated by other needy emigrants.

The stage coach arrived in Chariton about noon, April 16, 1856, and I was introduced to the town, or rather the town to me. Here my mother was met by her brother, M. C. Lazear, whom she had not seen for over a year, who took us up in a stiff tongue wagon with a scoop bed, ironed and braced everywhere. Chains were used in place of neck yokes. The wagon included tar buckets, trace chains, sole leather back bands, belly bands, breeching hamstrings, rope lines and hickory withes, etc. That was the kind of a rig that met my mother and her children in Chariton on that balmy, sunny spring day and took us to my Uncle Morford Throckmorton's place, now adjoining the town of Derby.

*Abstracted from Chariton Herald-Patriot, Thursday, July 21, 1932.

We arrived there long before dark. He lived in a log house and I can see that house yet; low and squatty, with a chimney and fireplace made of sod and clay held by sticks. One room sixteen by sixteen feet, round logs, roof of clapboards held in place by logs pinned on top, puncheon floor and one puncheon door and two small windows. We had supper of mush and milk and then with the cousins went out and rode the wagon tongue, after which we were called in and the trundle bed pulled out from under the one large bed. A bed was also made on the floor. The kids nowadays, know nothing about a trundle bed or a stiff tongue wagon and its wonderful wagon hammer. Does any boy know of anyone getting a licking for swiping a wagon hammer and forgetting to put it back through the double trees in the tongue? I do, more times than I care to tell.

We all slept well in that one room and on the floor with plenty of room to spare. The next day I went with my uncle, Michael Lazear, over to our own house—the two story double log house with a ladder for stairs.

In the east room there was a lot of store goods, hats, caps, boots and shoes, coats, etc. Father had shipped in 1855 a lot of merchandise, odds and ends of old stock which was a boon in later days. My uncle gave me a blue plush cap of which I was very proud.

The first school I attended in Iowa was in a log cabin, located about two miles away in Union township. This was a subscription school and was taught by Miss Ann Robinson, who became the wife of William McKnight, an early pioneer from Virginia.

The next school (subscription) was taught by Mrs. James Gilmore in a room of her own home about two and one-half miles away. She had about twenty pupils of all ages—including one or two young men.

One of the pupils was John McGinnis, who later became noted as a well digger, it being a common expression that he could dig a well "as round and straight as a gun barrel." While digging a well in 1887 he was injured by a falling windlass, the iron crank striking him on the head. While he kept on working, he soon began to complain of intense headaches and became morose, irritable and changed in manner.

I was called to see him on a very cold night in February, 1888. When I arrived he had opened the doors and windows of his house and had taken the fire out of his heating stove and then carried the stove out of doors. He was lying on his bed next to an open window in his shirt sleeves, chest bare to the winter air and being fanned. John claimed he was not sick and refused to take any medicine.

Dr. Charles Fitch, one of the best physicians in southwest Iowa, was with me in consultation, and we finally persuaded the patient to go upstairs and get some rest.

Henry Blous and Will Penick, good friends and neighbors of John's, stayed at his house and kept watch, making no noise so John could sleep. When morning came and John had not come down they

went upstairs. The window was open but John was not there. He had thrown his well rope out of the window and descended, leaving the rope hanging. He had mounted his horse called "Grant," and had started for Corydon, Iowa.

When he got to Corydon he waited until a hardware store was open and then bought a good double action revolver and shells. Then mounting "Grant" barebacked and no saddle or bridle, he returned home gloating and laughing over how he had fooled those fellows in thinking he was sleeping. He showed the gun and said he was not going to stand for being watched, he had not stolen anything or done any harm to anybody.

The sheriff and authorities were notified and they came and took him to Chariton and he was sent to Mt. Pleasant asylum. He was in the institution several months. One day when they took the men out for exercise through the fields, John wanted to rest and loitered along until quite a distance behind. All at once he started with race horse speed, down a ditch, jumping fences, running across fields into timber and made his escape.

Three days later he visited his sister, Mrs. Silas Bales. He would not come into the house but accepted some food and a blanket—visited his wife and mother, who was blind, but refrained from going into the house. Said he never would go back to jail as he had not stolen, or done harm to anyone and would kill anyone who tried to arrest him again.

His house burned while his wife and mother were away and John was not seen for several months. In 1889, John hired out to James Stafford through harvesting time, sleeping in the barn, usually with some of his men or boys. John would never turn his back to or before anyone. He took his meals in the house only when he could sit with a clear view of approach and a back door open.

Election time was nearing and the sheriff was up for re-election and John McGinnis was still at large. No endeavor had been made by Sheriff Ramsey for his recapture. His friends urging him to bring John in, the sheriff took a posse and went out in the evening to the neighborhood where John was staying. He inquired of Henry Blous, a veteran through the Civil war, as to the best line of capture, made him a deputy and gave him a gun and told him to shoot if necessary.

McGinnis was sleeping in the Stafford barn, with two or three other men and boys. Young Stafford, Elmer, was called out of the barn and said, "McGinnis was up in the mow with two other boys and was on to you fellows." Blous counseled a wait until morning.

The sheriff placed guards to watch the barn doors and openings until morning came. The entrance of the driveway was two and one-half feet above the level of the ground; the double doors were sliding, the bridge was about ten or twelve feet wide.

One of the boys called from an upper window as to what was wanted. The sheriff said he wanted to speak to John McGinnis. The boy answered that he

would come down. The sheriff was standing five or six feet in front of the double doors with a man on each side of the doors close up to the barn. Henry Blous stood back and to one side of the sheriff about twelve feet from the doors. McGinnis opened the doors a little way and asked the sheriff what he wanted.

The sheriff began to parley. John spoke up saying that he had not stolen anything or done harm to anybody, that he would kill anyone who tried to arrest him, warning the sheriff not to come closer. The sheriff took a step forward when John pulled his gun and fired. The man on the right fired at McGinnis and then the man on the left fired.

The sheriff staggered, walked around the corner of the barn and sank down. Blous holding the position given him, looked up and saw McGinnis standing between the sliding doors, holding the gun with both hands trained at his head. Blous fired immediately and John fell with a bullet in his head.

The sheriff was dead. John McGinnis was dead. None of the deputies was even wounded.

I was coroner of Lucas county at that time and held an inquest. The jury cleared and commended Henry Blous for what he had done.

This happened about 43 years ago. Doctors knew little about brain injuries at that time as compared with today. I removed the bullet from the brain, expecting to find some evidence of fracture of the skull, or injury caused by his iron windlass crank, but on careful search I found none.

In the winter of 1858-9 I attended my eighth subscription school in the home of Jacob Y. Honnold who owned 800 acres and lived about four miles distant, hence he was considered a near neighbor. He had fitted up a room upstairs in his house for school purposes and hired a teacher, Miss Lizzie Plymouth, whom he roomed and boarded. My brother Frank and I were also pupils and boarders. There were about twenty pupils, including the eight Honnold children.

Each child had a task allotted to him, in helping with the chores, carrying wood, etc.

Family worship was kept up, reading of the Bible and prayer in the morning, a song and prayer before retiring (an institution sadly neglected in this day and age).

Frank and I were permitted to go home every two or three weeks. So one Friday afternoon about 3 p. m. we started on foot, the sky clear and the sun shining. We had traveled about two miles and crossed a branch of Three Mile creek when we heard the howl of a wolf farther up the creek. We looked at each other and quickened our pace. Then another howl, long drawn out down the creek, another which threw us into a fit of agitation. We were two scared boys and as we increased in speed, our breathing became more difficult. I was choking and about lost my voice. I loosened the comfort about my neck and unbuttoned the coat at the top. My breathing became better and I began to pray the Lord to save me and my brother from the wolves. Looking back

frequently and seeing no wolves, and howling appearing farther away, we decreased our gait and were soon in sight of home. Next time we came home, Jim Honnold put us two boys on a horse and accompanied us until we could see our home. "Believe It or Not" we have never forgotten that the Good God did save us from the wolves.

The last subscription school we ever attended was in the summer of 1861. It was taught by Greene McQuerry, a native of Kentucky (unmarried), brother of Mrs. James Gilmore, my second school teacher in Iowa. Mr. McQuerry taught his school in a log house on my father's farm in Warren township, Section 19, about one-quarter mile east of Union township. The patrons of the school were Alexander and LeRoy McMains, Joseph Garland, Enos James, Darrel R. Christie and the two Throckmorton families, Morford and John. McQuerry was a popular teacher and it was a disappointment when he gave up two or three weeks of his school to enlist in the war. Joining a cavalry company in 1861 he was in the service only a short time before he sickened and died.

About ten years later it was decided that I was to take up the study of medicine and I was placed under the preceptorship of my uncle, Dr. William S. Throckmorton of Nenevah, Pennsylvania, for a period of two years. Then I entered Jefferson Medical College in 1875, and was graduated March 10, 1877, beginning the practice of medicine in the same year in Derby, Lucas county, Iowa.

In another article I hope to write a more complete medical history of Lucas county, but it may be of interest to recall some experiences of forty-five years ago.

I was called to see Hannah (Sanders) Yont in March, 1888. She was at the home of her parents, Mr. and Mrs. John Sanders, as she was expecting to become a mother and wanted to be near and with her parents. Apparently everything was normal. The labor was slow as most first cases usually are. I always gave plenty of time as long as things were progressing favorably. The first twelve hours she suffered little as the pains were few and of short duration. (Time was what she needed.) The next twelve hours pains somewhat increased in length and frequency. The next six hours were work for everybody—and then a sudden silence and peace reigned. No "instrumental or mechanical" interference—a normal labor. The "first time" grandparents were happy. The doctor, relieved of his responsibility, after a cup of hot coffee, mounted his horse and started for his home, wondering what or who next?

I was worried with care and responsibility as never before in my life and pondering over the serious health conditions. For in the winter of 1887-88 an epidemic of influenza was prevalent in a most virulent form, causing many deaths among young adults and complicating other conditions, especially lying-in women.

Arriving home I found new calls and requests

from my sick ones. Eating a hasty dinner and saddling a fresh horse, I started out making calls, returning home about 10 p. m. Had hot coffee and something to eat, changed saddle to a fresh horse and was off to see a couple of cases three and four miles distant but on the same road. I found these patients some better and much encouraged, I returned home where I got three or four hours of rest and sleep. On arriving at the Sanders farm that evening my fears were increased. Mrs. Yont had been restless through the night, complained of sore throat, some hoarseness and pain in one ear, slight elevation of temperature and cough. I told the father (Mr. Sanders) I did not like the symptoms which had developed through the night and if they increased I would like Dr. Charles Fitch, of Chariton, to see Hannah, but to say nothing to her or to her mother about it now.

The patient was resting fairly well so I bid them good day after telling them I would be back in the morning. Returning early in the forenoon I found the patient had had a restless night. Fever up, face swollen, eyes puffy, pain in head, had had chills, hoarseness and swelling of throat. Dr. Fitch, who was called by telegram from Lucas, arrived after noon and carefully examined the patient.

The doctor's prognosis was grave for he recognized the virulent form of the prevailing epidemic. The toxins being so poisonous and readily absorbed throughout the system would cause death in a short time. He said he had never in his experiences seen such an epidemic and I want to say here that I never saw such virulent conditions as were present in 1887-88, unless in the so-called "flu" in the World War. Dr. Fitch was employed on the case and saw Hannah every two or three days with me. She grew worse, abdomen extended, limbs swollen, yes, face and neck swollen beyond recognition. She died on the sixteenth day of her illness. The baby girl lived and has been a grandmother long since. Mrs. Yont's death was the first and only death in child bearing (or miscarriage) I ever attended in fifty-five years of practice. All my other cases recovered. I do not report this boastfully. I attribute my success in the above line of work to patience, "making haste slowly," giving plenty of time for nature to right things.

I will digress to report some of my own trouble. Not that of a doctor, but rather that of an afflicted family. In the epidemic first in my own family, my wife had been confined on December 3, 1887. After a normal delivery everything went well until about the third day, excepting for a slight cold and hoarseness. Then severe pains in the abdomen, back, neck and limbs presented themselves, rapidly growing worse. Once (in the second week) I thought my wife was dying. She had difficulty in breathing. I propped her up in bed and opened the doors and windows to the cold winter air. She was "air hungry" and was panting for breath. Her pulse was rapid—above counting. Evidently she had a heart clot, followed by excruciating pains and great bodily

suffering. The influenza toxins were so virulent that recovery was slow. At times she did not know she had a little baby. So day by day, time passed and I did not know from morning to night whether I would have a mother for my five little children. Through a slow convalescence health was regained and the "Good Lord" spared her to me and the children for over forty years. She passed away October 6, 1927. Our girl baby thrived and is living at this time. Such a thing as a trained or a registered nurse was not known in Lucas county or anywhere else at that time.

OBITUARIES

Cassius T. Lesan, M.D.

1874-1932

Doctor Cassius T. Lesan, for thirty-five years, a practicing physician in Mount Ayr, passed away at his home early Saturday morning, July 9. The immediate cause of death was uremic poisoning, although Dr. Lesan had been suffering from arteriosclerosis for several years.

He was graduated in 1897 from Rush Medical College and located in Mount Ayr the same year, where



he continued his professional duties up to a year ago when illness forced him to retire from active practice. Doctor Lesan, who was always interested in civic and community health matters, served his county as coroner for several years, and was instrumental in organizing the local Red Cross Chapter in 1917. That his scope of interest and ability was more far-reaching than county affairs, is manifested by the fact that since 1929 he had served as a member of

the Iowa State Board of Health, being appointed to that position by Governor Hammill, and reappointed last year by Governor Turner. During the World War, Doctor Lesan served as a captain at both Fort Riley, Kansas, and Camp Shelby, Hattiesburg, Mississippi. His fraternal affiliations consisted of the Ringgold County Medical Society, the Iowa State Medical Society, the American Medical Association, the American Public Health Association, the American Association of Railroad Surgeons, and the American Legion.

Funeral services were held Monday, July 11, from the residence, and were simple in character, as he had at one time requested. The large number of acquaintances and professional friends from Mount Ayr, the surrounding territory and Des Moines, who attended the services, spoke a silent tribute to the love and esteem in which Dr. Lesan was held in the community.

A. C. Page, M.D.

**Alexander Daniel McKinley, M.D.,
1876-1932**

When Alexander Daniel McKinley passed away at his home, Saturday, July 9, after a sudden heart attack, Des Moines lost one of the most prominent members of the medical fraternity in recent years.

Dr. McKinley was born at Claremont, Iowa, in Fayette county, December 24, 1876. His early education was acquired there and in 1900 he was graduated from Iowa State College at Ames, with a Bachelor of Science degree. After teaching school at Waterloo for two years, Dr. McKinley enrolled as a student at Rush Medical College, graduating from that institution in 1906 and in 1910, entered the practice of medicine at Lawler, Iowa, where he continued until 1917. At that time, Dr. and Mrs. McKinley came to Des Moines, where Dr. McKinley practiced medicine up to the time of his death, except for a period of two years during the World War when he was serving his country as captain in the Medical Corps, both in the United States and France. In January, 1920, four months after the Des Moines Health Center was organized, Dr. McKinley was selected as the first medical director, and he continued in that position up to the time he passed away. He was also vice president of the State Building and Loan Association of Des Moines.

Besides the above mentioned activities, Dr. McKinley belonged to the Polk County Medical Society, the Iowa State Medical Society, the American Medical Association, and the American Legion.

There are few men whose kindness of spirit gleams out so compellingly through friendly eyes that they demand and receive instant friendship. There are still fewer men whose characters are so sterling that friendships thus spontaneously formed, last throughout a lifetime. Such a man was Dr. McKinley. To have been associated with him intimately as I have been for so many years has been a privilege. To have been his friend is an honor which I deeply appreciate.

Dr. McKinley is gone. It is sad and lamentable

that he should have departed so early. However his numerous friends throughout the state are grateful that he has lived and are a little better because of the man Dr. McKinley was and what he stood for. The community he served, although its members grieve because of his departure, is nevertheless happier and better because of his character and because of the splendid life work that was his. He is gone but his influence for the finer things in life will continue to blossom long after him and we who have known him will never forget his constant, kindly smile. His memory will live and continue to bless those who were near and dear to him.

Daniel J. Glomset, M.D.

Resolutions

Whereas: It has pleased Divine Providence to remove from our midst one of its substantial, active, and honored members, namely, Dr. A. D. McKinley, of Des Moines, Iowa,

Be it resolved, That by his passing to his eternal rest, the Austin Flint-Cedar Valley Medical Society has sustained the loss of a useful, honored and respected member and shall miss his genial companionship and wise counsel.

Be it further resolved, That a copy of this resolution be spread upon the minutes of this society and a copy mailed to his immediate family.

Edward L. Rohlf, President,
Austin Flint-Cedar Valley Medical Society.

OPINION OF ASSISTANT ATTORNEY-GENERAL REGARDING INCORPORATED CLINICS

In an opinion issued July 30, Assistant Attorney-General Gerald O. Blake declared the practice of medicine in Iowa by medical clinics as incorporated organizations to be forbidden under the Iowa law, and cited as precedent the supreme court decision in the Bailey Dental Company, filed in January, 1931.

The following statement by Mr. Blake is a summary of the opinion: "In view of the fact that the employees of an incorporated clinic would be under the supervision and direction of the officers of the corporation, they would not be free agents and the public would be left unprotected if unlicensed persons and corporations were permitted to practice through and under the cloak of a licensed individual."

The Council of the Iowa State Medical Society, at its meeting June 23, 1932, went on record as disapproving the use of the name of the town of location as the title of a clinic organization. The following resolution was unanimously adopted:

"RESOLVED that the Council of the Iowa State Medical Society suggests and recommends that whenever two or more physicians in any locality associate themselves for the practice of medicine, the organization thereby formed be NOT called by the name of the town, city or county in which they are located."

To date no opinion has been issued by the Attorney-General or his assistants regarding the use of the word "clinic."

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***FERTILITY AND STERILITY IN MARRIAGE**—Their Voluntary Promotion and Limitation.—By Th. H. Van de Velde, formerly Director of the Gynaecological Clinic at Haarlem, Holland.—Translation by F. W. Stella Browne.—448 pages, illustrated.—Covici, Friede, Inc., New York, 1931.—Price, \$7.50.
- ***THE MEDICAL CLINICS OF NORTH AMERICA**—Mayo Clinic Number, May, 1932.—(Index Number)—Vol. XV, No. 6.—(Issued serially, one number every other month.)—239 pages, with 31 illustrations.—W. B. Saunders Company, Philadelphia and London.—Per clinic year, July, 1931, to May, 1932.—Price, paper \$12.00; cloth, \$16.00.
- ***NUTRITION SERVICE IN THE FIELD—CHILD HEALTH CENTERS: A SURVEY.**—A Publication of The White House Conference.—139 pages.—The Century Company, New York and London, 1932.—Price, \$2.00.
- ***OBSTETRIC EDUCATION**—Report of the Sub-committee on Obstetric Teaching and Education.—A Publication of The White House Conference.—302 pages.—The Century Company, New York and London, 1932.—Price, \$3.00.
- PULMONARY TUBERCULOSIS**—By Maurice Fishberg, M.D., Chief of the Tuberculosis Service, Montefiore hospital, and of its Country Sanatorium for Incipient Tuberculosis.—Fourth Edition, Revised.—Vol. I and II.—Illustrated.—Published by Lea & Febiger, Philadelphia, 1932.—Price, \$15.00 set, 2 Volumes.
- ***SURGERY WITH SPECIAL REFERENCE TO PODIATRY**—By Edward Adams, M.D., Professor of Surgery, the First Institute of Podiatry of New York.—International Journal of Surgery Co., New York, 1932.—Price, \$5.00.
- ***SURGERY OF THE CHEST**—By George F. Straub, M.D., F.A.C.S.—475 pages with 341 illustrations, including 68 color plates.—Charles C. Thomas, Publisher, 1932.—Price, \$10.50
- THE STORY OF MEDICINE**—From Medicine Man to Modern Physician.—By Victor Robinson, M.D., Professor of History of Medicine, Temple University School of Medicine, Philadelphia.—Albert and Charles Boni, New York, 1931.—Price, \$5.00.
- ***SURGICAL ERRORS AND SAFEGUARDS**—By Max Thorek, M.D., Surgeon-in-Chief, the American Hospital, Chicago, with a foreword by Arthur Dean Bevan, M.D., Professor of Surgery, Rush Medical College.—696 pages, with 668 illustrations.—J. B. Lippincott Company, Philadelphia, 1932.—Price, \$10.00.
- ***SURGICAL PATHOLOGY OF THE FEMALE GENERATIVE ORGANS.**—By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas.—346 pages with 285 illustrations.—J. B. Lippincott Company, Philadelphia, Montreal and London, 1932.—Price, \$5.00.
- A TEXT-BOOK OF CLINICAL NEUROLOGY**—By Israel S. Wechsler, M.D., Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, Neurological Institute and the Montefiore Hospital, New York City, Second Edition, Revised. 759 pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931.—Cloth, \$7.00 net.
- VARICOSE VEINS**—By H. O. McPheeters, M.D., F.A.C.S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital.—Illustrated with 62 half-tone and line engravings.—Philadelphia: F. A. Davis & Co., 1931.—Cloth. Third Edition. Price, \$3.00.

* Book Review in this issue.

BOOK REVIEWS

FERTILITY AND STERILITY IN MARRIAGE

Their Voluntary Promotion and Limitation. By Th. H. Van de Velde, formerly Director of the Gynaecological Clinic at Haarlem, Holland. Translation by F. W. Stella Browne. 448 pages, illustrated. Covici, Friede, Inc., New York, 1931. Price, \$7.50.

Significant of the public interest manifested in problems related to the voluntary limitation of offspring, there have appeared during the past few years a considerable number of popular treatises dealing with this problem. It would appear that in the continental countries an attitude on this problem has already become firmly established as the public policy. In the United States, however, the problem has been one which has been kept in the background and while legislation has been enacted defining our attitude on the matter, public opinion appears rebellious to these legal restrictions, and in many communities open violation of the present laws has not only become commonplace, but in many instances, encouraged by public sentiment. This volume has been prepared for the information and guidance of physicians and social workers interested in the promotion of voluntary limitation of offspring.

The subject is introduced by the presentation of the ethical and theologic aspect of the problem and the significance of family limitation in national and

international life. The author next discusses the physiology of reproduction, presenting in detail those factors vitally concerned in fertility. The problem of sterility in women is discussed from the standpoint of its cause, the mechanism involved, its prevention and treatment. Duly appreciating the importance of impotency in men in this problem the author discusses this phase of the subject in detail, setting forth the physical causes of impotency and their appropriate treatment. The final section of the book is devoted to the prevention of undesired conception, discussing all of the known methods of prevention, including those of temporary and permanent sterilization by means of surgery and radio therapy.

A most interesting section of the volume deals with the problem of artificial termination of pregnancy, presenting clearly both the moral and the legal aspects of this problem. It is particularly interesting to compare the viewpoint of a European scientist on this much debated topic with that of the present American standard.

THE MEDICAL CLINICS OF NORTH AMERICA

Mayo Clinic Number, May, 1932. (Index Number)—Vol. XV, No. 6. (Issued serially, one number every other month.) 239 pages, with 31 illustrations. W. B. Saunders Company, Philadelphia and London. Per clinic

year, July, 1931, to May, 1932. Price, paper \$12.00; cloth, \$16.00.

This volume prepared by the staff of the Mayo Clinic at Rochester presents a number of usual and unusual conditions of general interest to the practitioner. Outstanding among the contributions to this number are: chronic ulcerative colitis associated with peptic ulcer, by Bargen and Rivers; inflammatory lesions of the colon simulating carcinoma, by Brown; atypical exophthalmic goiter, by Dunlap and Davis; stone in the common bile duct, by Jordan and Weir. Among the more unusual conditions discussed is that of Meckel's diverticulum with unusual clinical manifestations, by Faust; atypical syndromes in uremia, by Horton and Emmett; and pulmonary calculus simulating primary bronchial carcinoma, by Maytum and Vinson.

The opening article in the volume by Walter C. Alvarez, entitled "Patients Who Are Incapacitated by a Little Indigestion," is in itself well worth the price of this volume. Alvarez states: "One of the sad features of medical education today is that students in universities rarely see cases of this type." Every medical student and every practitioner of medicine will have a broader and more sympathetic attitude toward his patients after having read this outstanding discussion.

NUTRITION SERVICE IN THE FIELD—CHILD HEALTH CENTERS: A SURVEY

A Publication of The White House Conference. 139 pages. The Century Company, New York and London, 1932. Price, \$2.00.

This volume presents the findings and recommendations of two subcommittees of the Committee on Medical Care for Children of the White House Conference on Child Health and Protection.

The first part of the book is devoted to the report of the Subcommittee on Nutrition. This report is a study of nutrition work, a relatively new activity in the general program for child health and protection. It explains what has so far been accomplished, reveals the need for nutritional education, makes definite recommendations for raising services to the required standard, and describes the work of outstanding nutrition services for children in different parts of the country.

The second part of the book is devoted to the report of the Subcommittee on Child Health Centers. This report includes a review of an extensive survey of child health centers, a list of health centers in the United States and its possessions, an account of the nature and scope of the work of these centers, and the recommendations of the subcommittee for improving and extending this important part of child welfare work.

OBSTETRIC EDUCATION

Report of the Subcommittee on Obstetric Teaching and Education. A Publication of

The White House Conference. 302 pages. The Century Company, New York and London, 1932. Price, \$3.00.

The findings of the Subcommittee on Obstetric Teaching and Education of the Committee on Prenatal Care are discussed in this volume, and recommendations are offered to improve obstetric practice and to lower the present high maternity death rate in the United States. Conscious that the high maternal mortality rate is a reflection on the training and education of those who are charged with furnishing maternity care, the subcommittee made an appraisal of: the training of physicians for obstetric practice, including undergraduate training and subsequent or graduate education, the obstetric education of nurses and nursing attendants; the history, status abroad and status in this country, education, and training of midwives; and the obstetric education of the laity and of social workers. The subcommittee advocates more adequate professional training and points out the necessity of securing the recognition and support of the laity without which no comprehensive plan for maternal care will function properly.

SURGERY OF THE CHEST

By George F. Straub, M.D., F.A.C.S. 475 pages with 341 illustrations, including 68 color plates. Charles C. Thomas, publisher, 1932. Price, \$10.50.

The author in preparing this volume had foremost in his mind the creating of greater interest for the problem of thoracic surgery. For this reason, the treatment of the subject is chiefly of a practical character. During the past twenty years, great evolution has been experienced in this branch of surgery, and it is these newer principles and concepts which the author vividly describes in this volume. The volume is more than a treatise on thoracic surgery—it, in fact, an atlas. Three hundred forty-one illustrations, including sixty-eight colored plates, are incorporated in the text, illustrating these various surgical procedures and results obtainable by these methods. The author presupposes a knowledge of the anatomic and physiologic facts commonly given in textbooks, assuming that the reader has this background of knowledge before entering this special field. To the surgeon who has a background of experience, this volume furnishes a recent and complete survey of thoracic surgery. A most interesting section of the work deals with the treatment of pulmonary tuberculosis, tuberculous pleurisy and empyema, making the volume exceptionally attractive to those surgeons doing work in connection with pulmonary tuberculosis. The section dealing with surgery of the heart and blood vessels of the mediastinum is most interesting and will appeal to every general surgeon. This well written volume is authoritative and complete, and is perhaps the most outstanding work of its character available today.

SURGERY WITH SPECIAL REFERENCE TO PODIATRY

By Edward Adams, M.D., Professor of Surgery, the First Institute of Podiatry of New York. International Journal of Surgery Co., New York, 1932. Price, \$5.00.

This volume is intended to serve as a guide to the diagnosis and surgical treatment of many diseases and pathologic conditions of the body in general, especially their relation to the foot, as well as those conditions which primarily affect this member. The author has discussed the underlying principles of surgical practice including asepsis and antisepsis, wounds, contusions, hemorrhage, and so forth. On this background he has discussed various surgical conditions of the arteries, veins, the problems of fractures and dislocations and the recognition and surgical care of tumors affecting the feet. The closing chapters of the work deal with dressings, local anesthesia, general, spinal and rectal anesthesia and the general problems of after treatment of foot conditions.

The volume is written in very elementary style so that the student unacquainted with medical terms can appreciate the subject presented. The volume is intended both for undergraduates and graduates in this special branch of practice. At the close of each chapter a short bibliography is furnished for a more extended reading along the particular line.

SURGICAL ERRORS AND SAFEGUARDS

By Max Thorek, M. D., Surgeon-in-Chief, The American Hospital, Chicago, with a foreword by Arthur Dean Bevan, M.D., Professor of Surgery Rush Medical College. 696 pages, with 668 illustrations. J. B. Lippincott Company, Philadelphia, 1932. Price \$10.00.

No person is so perfect in knowledge and experience that error in opinion or action is impossible. While this statement is obviously true, we have no knowledge of a volume on surgery or surgical problems which attacks the practice of surgery from this viewpoint, except this recently published volume by Dr. Max Thorek. It is difficult to appreciate the scope of this work from its title since only a surgeon with great experience could command sufficient viewpoint to properly appreciate errors, and at the same time offer valuable suggestions for their corrections.

The author of this volume, with an enviable background of surgical experience, has exhibited remarkable astuteness in his selection of surgical errors and in his thoroughly practical suggestions for their correction. He begins his volume with a discussion of errors and safeguards in connection with surgical operations in general, discussing such matters as anesthesia, acidosis, pulmonary complications and the "bad risk" patient. In succeeding chapters he discusses the surgical problems peculiar to the regions, dealing in turn with those operations on the head,

neck, thorax, abdomen, male and female genitalia, and finally the extremities. Each chapter is furnished with an adequate bibliography. The purpose of this volume, quoting from the author, is "Because of his own mistakes and the dangers which he himself has met, that the author is filled with the keen desire to impress their possibilities on others, so that they may benefit from his failures and disappointments." Certainly, the volume is testimony of the efficiency with which the author has met his objective. The volume is adequately illustrated with many photographs and drawings, some in colors.

SURGICAL PATHOLOGY OF THE FEMALE GENERATIVE ORGANS

By Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. 346 pages with 285 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1932. Price, \$5.00.

As stated in the title this text deals only with the surgical pathology of the female genital organs; and consequently does not mention symptoms, treatment or prognosis. It is intended primarily for the surgeon, who, because of his interest in the pathology and histologic diagnosis of the cases that come under his observation, will require an up-to-date text for guidance. Since a thorough appreciation of surgical pathology is a requisite to every operative procedure, the volume should enjoy a very wide distribution. The text itself is very brief, but it has a wealth of illustrations that make lengthy descriptions unnecessary. Its complete index together with its division into diseases of each genital organ saves time in looking up any particular condition.—F. W. R.

NARCOTIC CURE QUESTIONED

Some six months ago Professor Wilder D. Bancroft, of Cornell University, and his associates announced a new cure for narcotic drug addiction and alcoholism. The drug proposed was sodium rhodanate or thiocyanate.

The Tompkins County Medical Society of Ithaca, New York has protested to the American Medical Association that in their opinion the announcement of Professor Bancroft was untimely and misleading. They point out that at the time the announcement was originally made only one case had been successfully treated by the drug and that investigation indicated that this man had been cured six times before. Their attitude that to herald a drug as a cure on a basis of one case was unscientific is borne out by the fact that subsequent experimentation with the drug indicates that it has failed in at least one hundred cases. They logically point out that many physicians unacquainted with the details of the past experiments with this drug may be misled, with serious results, by the untimely announcement of the drug as a cure.

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DES MOINES, IOWA, SEPTEMBER, 1932

No. 9

THE MEDICAL SECTION OF THE IOWA WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION*

FRED MOORE, M.D., Des Moines

Mr. Chairman and Members of the Iowa State Medical Society: The question has often been put to me, what is all this White House Conference business about? It is rather a difficult thing to answer in a few words.

Briefly, I would say that these White House Conferences are based upon the well known fact that only a small per cent of what we have to offer children for the protection of their health and development is reaching the children en masse.

Why does it not reach them? Because of ignorance on our part professionally, or on the part of the parents, or carelessness on the part of either group in delivering these things to the children; or the financial inability of the parents to obtain what is available for their children.

I am sure there is no one who would deny that the children should have the best that we have to offer, for in that certainty lies our future hope. The theme of these White House Conferences has been to know more about children, what is being done for them, how it is being done, how much more may be done, and how may it be accomplished.

The Iowa White House Conference is a direct outgrowth of the recent National White House Conference called by President Hoover. There were two previous national conferences, the first one called by President Roosevelt, the second one by President Wilson.

Obviously, all the elements pertaining to child health and protection do not lie in any one field. Therefore, if we are going to deliver the utmost to the mass of children, we must have the coöperation of all interests involved, public health, medicine, education, home training, the physical care and housing and education of handicapped chil-

dren, of children who are handicapped not only physically, but mentally, and from a social point of view.

It is my intention to review for you the Medical Section of the Iowa White House Conference. The committee on Child Health and Protection of the Iowa State Medical Society has assumed as its foremost obligation for the past year the promotion of the medical phases in this Iowa White House Conference on Child Health and Protection. It has done so on the presumption that we in the medical profession should assume a proper leadership if we are qualified to do so, in things pertaining to the medical questions involved in child health and protection.

In connection with the Iowa White House Conference, I wish it were possible for all of you to realize the whole-hearted support and interest that we have had from all of the pediatricians of the state, as well as from many men engaged in general practice and obstetrics. They have all been very much interested in it and have contributed a great deal of work. We tried to bring together some of the facts pertaining to children of Iowa. It would be impossible in the time allotted for me to review those papers. I think all of you received a program. They were mailed out through the office of the Iowa State Medical Society to the full membership.

In brief review of the program of the Medical Section, there was a study of maternal and neonatal mortality in Iowa by Dr. E. D. Plass and his associates; childhood morbidity and mortality in Iowa by Dr. Roland H. Stahr and men associated with him; study of infant and childhood nutrition in Iowa, by Dr. P. C. Jeans and others associated with him; a study of control of contagious diseases in Iowa by Dr. J. C. McKitterick of Burlington, and others associated with him. These papers were all the results of group work. "A Study of Tuberculosis in Children in Iowa," was presented by Dr. J. D. Boyd; "A Study of Rheumatism in Children in Iowa," by Dr. D. H. Kelly; "Instruction in Obstetrics and Pediatrics in Nursing Training

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

Schools in Iowa," by Maud Sutton, director of Nursing Training Division, State Department of Health.

The problems of the physically handicapped children from the medical point of view were discussed by a group of orthopedists, Dr. Eugene Wolcott, Dr. Arthur Steindler, Dr. Arch F. O'Donoghue, and Dr. Karl Werndorff; "Chronic Non-Specific Lung Infections in Children in Iowa," by Dr. Mark L. Floyd; "School Health Program in Iowa," by Dr. Helen Johnston, Dr. E. P. Lovejoy.

These papers were very interesting and will be published in full in the proceedings of the Iowa White House Conference, for which I am informed there are already over 600 orders. The publication is in charge of Mr. C. F. Pye of Des Moines. The cost of the report will not exceed two dollars, and may be ordered from Dr. D. C. Steelsmith, Commissioner of Health.

The president of our State Society was also on this program. The Medical Section of the Conference was exceedingly pleased to be able to present as the guest speaker at this conference Dr. E. H. Cary of Dallas, Texas, president-elect of the American Medical Association. I am sure that you will be interested in some of the things that Dr. Cary had to say. I should like to have you know something of the background from which he speaks.

Dr. Cary is an eye, ear, nose and throat specialist. He has devoted his life to the practice and teaching of that branch of our profession, as far as his activities in the field of medicine are concerned. If one is to accept the magazine *Time*, one may judge that he has also had extensive business interests throughout the southwest. I say that in order to indicate that his major activities have not been in the field of child health and protection nor in the field of public health, so he cannot be charged with being an enthusiast or unbalanced in that direction.

Dr. Cary said to us in Des Moines the evening that he presented his paper, "Until I was invited to come up here and talk to this conference, I hadn't given this subject very much thought. Since then I have been thinking more about it as I have had to travel about as president-elect and have seen so many diverse problems of the medical profession. I have given it a great deal of thought and the thing has gripped me in amazing fashion."

I wish at this time to read some excerpts from Dr. Cary's paper which I think are especially worth while.*

"CHILD HEALTH AND PROTECTION FROM THE DOCTOR'S VIEWPOINT"

When honored by an invitation to be a guest of the Iowa White House Conference on Child Health and Protection, I am frank to say that I did not fully realize the far-reaching influence such a gathering would probably have upon the future attitude of the members of our profession and the public.

It has been said that the medical profession can be criticized for failing to carry to the people the knowledge which it possesses. As a profession, we have always had certain inhibitions—we have shunned publicity. Physicians have believed that the public would misinterpret any unusual effort on their part. From this assumption the medical profession has always turned, to avoid even the appearance of being unethically engaged.

There are many problems connected with children, some of them grave, all of which interest the members of our profession. We should not shirk our responsibility. We should be willing to meet the layman who is interested in the welfare of the child, for the purpose of coöperation. The layman has been willing to seek knowledge: this knowledge can only be gained through the members of our profession. Leadership is associated with the tactful use of knowledge.

I am constrained to believe that the layman recognizes that leadership in health matters should be based upon a knowledge of the medical sciences, and further, that this knowledge should be fortified with a clinical experience, ripened through contact with suffering humanity.

So it behooves us as a profession to recognize these human attitudes and aptitudes, and assume that leadership in all matters relating to medicine, which is our natural sphere. Our assumption is based upon our education, training, and desire to serve.

We must recognize that the medical man has a dual occupation, for in the practice of medicine the relationship between the doctor and patient is a very personal one. The physician is respected for his knowledge, he often receives a friendly affection and is trusted with many confidences. This dependence can be beautiful in human relations. Too, he is responsible in a civic way, for he must realize his obligation to take part in public medical service. He should interest himself in the activities of organizations which may be trying to meet certain unsolved health problems. Many of these have arisen chiefly from an awakened public health consciousness, which has come from the revelation of medical research.

The medical profession does not want to believe that the enlightened public desires to inter-

*Editor's Note:—We have fortunately been able to secure the full manuscript of Dr. Cary's paper and it is presented herewith in its entirety.

fare with the private practice of medicine, but rather that it is groping for a more widespread application of what it believes to be medical discoveries. Since it is untrue that we wish to deny the public the benefit of all of the knowledge which would be helpful to it, our public relations should be so guided that we will not only join the layman, but willingly place our knowledge and leadership on the altar of public good. Should this be accomplished, I firmly believe that the people would welcome our coöperative efforts on their behalf.

We practitioners call each other colleagues. The public health officer must also be a colleague in the truest sense. Our public relations should be such that any program of salvage, whether from pain or death, would be one in which we should all share a common human interest.

In practicing curative medicine, we have no desire to subsist upon the ills of man which are preventable. We realize the ever-increasing breadth of preventive service and that our first task is to save the life of our fellow man. If we were very practical in our thinking, it might occur to us that it requires thought and labor to preserve and make efficient those who are saved.

As medical practitioners we are no longer isolated. We are definitely committed to preventive measures which deal with groups, and these if effective, seem to deprive the profession of individual practice.

It is our first duty to coöperate to the limit in preventing disease, regardless of how it affects us. This we can do in good conscience, for it is also true that the complexities of life create new possibilities for the medical man, and his usefulness is not lessened, but apparently ever enlarged.

There can be no contest in doing good; the service one renders in this life brings its compensations.

The people themselves have a conception that scientific medicine has gone far in its development, and through its application, it can limit unnecessary illnesses. They have been wondering whether the present public health organization is adequately trained or if it needs to be enlarged with many more expertly trained men to provide maximum care. We have it in our power to guide all these questionings and efforts to advance preventive medicine. The profession should be the major force in proposals for solution of the vast problems concerning adequate medical service.

Social changes are undoubtedly confronting us. We have had a tremendous number presented already. Social trend should be studied, as medicine is a social function, and all of these changes in some way affect the practice of medicine.

There is good reason for believing that one of the greatest factors in human happiness, and I think in civilization, is the preservation and continued flexible growth of the medical profession to meet human needs. We must not be deterred from contributing our weight of opinion and battling for leadership in any lay organization or foundation interested in health matters, which seems to have public support. Rather should we more definitely express our convictions and coöperate with the people, recognizing that medicine has assumed a public character.

It is unfortunate that every doctor is not civic-minded, for a well developed civic instinct would enlarge his point of view.

Where public welfare laws represent the true interest of the people, the individual relation of the doctor to his patient is not disturbed. Every county medical society should be in touch with new conditions and within the society there should be an intelligent plan devised to prevent economic disturbance of the private practice of medicine. A few of the wisest members of the county society should deal with such matters as they arise, and all differences of opinion should be settled.

The spirit of coöperation can become an economic asset, if the medical profession and the public have the same objective—it insures the improvement of the health and happiness of the people.

What I have said has a wide application, although I am here to discuss more particularly child health, but it is all inter-related.

I believe that we will all agree concerning the modern view of prenatal care, but this part of a child's life, and in all probability its first two or three years, would lack interest to you on this occasion. Yet it is impossible to speak of child health and prevention of disease from the doctor's point of view without a searching history of the forbears of the child. Heredity is a marvelous thing. When the little patient inherits that something which is represented in vim, vigor and vitality, the doctor has an added advantage. He finds it easy to steer such an infant over the rough waters of babyhood. His directions may not always be followed, but his results may be so good that he is generously appreciated. On the other hand the physical qualities of the child lacking a sturdy stamina of inheritance puts the doctor on the defensive, with losses here and there, even though he may have given the most meticulous care.

Undoubtedly the highly trained pediatrician who was primarily an educated and experienced general physician, is the most desirable doctor for children. He bridges what was a chasm of despair

for many well-meaning mothers and family doctors who really could not fathom the needs of the infant.

The efficient pediatrician is making a most excellent demonstration of preventive medicine, in which the people are being educated in the wisdom of securing medical advice before disease is manifested. The unsafe pediatrician is cursed with a self-assurance which leads him to make a diagnosis of special conditions without comprehensive training in special fields. The spirit of coöperation here is greatly needed. Able medical men should be willing to lend their knowledge to each other for the purpose of making a correct diagnosis.

As I understand it, a pediatrician's point of view comprehends a physically fit child to be developed with a proper diet of quality and quantity. He should have a knowledge of the organic troubles which might arise due to infections in various places, such as the sinuses, tonsils, and gastro-intestinal tract, as well as recognize infectious diseases of a general nature.

The mental health of the child is often closely associated with its social relations. Family adjustments are needed and are brought about through a correct use of the accumulated knowledge related to this subject. There are environmental situations too, which are difficult to control. These are of great importance to the child, requiring judgment and tact on the part of the physician to harmonize them.

I would say that the wise pediatrician is here to stay. He is needed and has proved his worth. He it is who can most readily recognize that train of unfortunate circumstances in a child's life which has brought stress beyond the physical and mental capacity of its nervous system.

We are beginning more and more to sense the fact that future civilization lies with the proper development of the child. Childhood has never had in all the years gone by, such fortunate opportunities for health and happiness. Every facility is offered for a more perfect development of our children in this era. It lies within the province of the medical profession to direct the family and child so that coöperation will be the result. In recognition of the opportunities for education of the family, the pediatrician should have the encouragement of the profession. Man is but a grown-up child, and health standards and increased efficiency are more likely to be obtained if we are permitted to direct the health of the child.

We must recognize that each individual must, if possible, become a self-sustained unit. His physical defects must be eliminated, and if his

nervous system is normal, his capacity for self-support, comfort, and happiness should be realized. This cannot be accomplished without danger, except by intelligent application of modern medical information. There can be no separation of the psychologists, psychiatrists, social workers, and specialists, in these various medical fields. If this is not duly appreciated and the means of coöperation and consultation made readily available, there will be chaos.

Unification of control in public health matters cannot be divided without great loss to the nation. Dictation or direction is not needed from bureaus separated from the public health agencies.

Iowa is a pioneer state in its work for children. The citizens of other states have been interested and have watched with increasing approval what has been accomplished. This work has undoubtedly had a far-reaching influence upon the public health service and child welfare departments throughout the country. Most interesting is your child welfare research station—and with such a demonstration the people of this country should rest assured that the good accomplished will be of lasting benefit to future generations.

At the last White House Conference, it was reported that of forty-five million children, thirty-five million are reasonably normal, six million are improperly nourished, one million have defective speech, one million have weak or defective hearts, six hundred and seventy-five thousand present behavior problems, four hundred and fifty thousand are mentally retarded, three hundred and eighty-two thousand are tuberculous, three hundred and forty-two thousand have impaired hearing, eighteen thousand are totally deaf, three hundred thousand are crippled, fifty thousand are partially blind, fourteen thousand are totally blind, two hundred thousand are delinquent, five hundred thousand are dependent. Of these ten million deficiencies it is said that eighty per cent are not receiving the necessary attention. This is a challenging statement made in a high place. It is probably true. It is imperative that the medical profession lead those forces of society which are willing to help correct and decrease the number of abnormals so far as it is humanly possible to do so.

We can boldly take sides and lead those forces which demand for the child the application of certain suggestions brought out at the last White House Conference, and so succinctly summarized by our distinguished Secretary of the Interior, Dr. Ray Lyman Wilbur. He lays stress upon social factors for the general good of the child to be had through education of the parent and school teacher.

He pleads that the adult should understand the child, and that the child should not be required to do all the comprehending. Every mother should have prenatal and postnatal care.

The public should recognize that the child must be examined periodically, its physical forces known, and proper advice given, if young manhood is to gain maximum efficiency. This examination should be all-inclusive and repair work suggested.

This era carries a burden of untold accidents, producing cripples, often death. Vast numbers can be saved if our educational forces coöperate in a more united and impressive effort toward riveting the child mind upon traumatic possibilities.

Our health forces, both public and private, should guard the child from communicable disease to which it might be exposed by contact with those infected at home or school. Food requirements too, should be properly worked out.

Hygiene, which is so well understood, should be practiced by the growing youth of the land.

The principle that one is born free is generally accepted. Every child, however, has an individuality which should be observed and guided and its dominant qualities developed, with the hope that the state will prosper when there are fewer square pegs in round holes.

Reverence and faith should be cultivated. Certainly one's home life should be surrounded with those high qualities which lead to faith, hope, and charity. It has been said that Young America lacks reverence. Maybe it does. If the truth is magnified, hypocrisy discouraged, maybe there would be better understanding. Moral concepts differ under different conditions, but there are a few things which remain eternal.

We doctors believe in the prevention of disease; in prevention of accidents; in prevention of losses from every cause. We believe in treatment when disease occurs. This may contemplate any method best adapted to the case in hand.

Medicine is broad in concept and application. It is at the service of mankind. Those who lead in the great movement of understanding between the people and the profession must continuously endeavor to focus public attention upon its blessings; sporadic effort is not enough. Action has to be sustained until it becomes automatic for the best results from mass endeavor.

Preventive medicine concerned with the growth and development of childhood discloses information which can be made to bring into being the well-born child—to further see to it that he thrives lustily without halt during infancy; that he develops physically, mentally, and socially, acquiring

a sound education with which he can pass through adolescence into a more secure maturity.

Continuity of the scientific advance in the cause of prevention of disease is a long story. It was made possible by the slow evolution of valuable scientific instruments which was extremely *slow* in being developed to where the minute enemies of man could be identified and disclosed to the profession of medical men. The study of infectious diseases became profitable within our era and today we stand upon a high point, where we may look forward or turn and point to the possibilities of the future, realizing that we have yet to decrease the death rate of children under five, who constitute four-fifths of the mortality of all who die from infectious diseases; and the further fact that from birth to the tender age of five, twenty-five per cent of all deaths occur.

At this point, not to mention what occurs from the age of five to maturity, we have yet a task of education and more education to change the record—by driving back the forces of the grim reaper of youthful and tender lives.

Someone has said, "The child is a dynamic personality in the making. It is a composite individuality with evanescent manifestations of growth and development. It is a veritable little laboratory, transforming food into growth, experience into life habits, environment into personality," all of which is true.

We must guard the normal growth of the mind and body of the children of our land. As the future of our country is interwoven in this great bundle of life, we should more and more help direct the destiny of this fair land.

Our knowledge is increasing—our desire to help is evident. From meetings of this character a new spirit of conquest is born. Let it guide aright the hearts of all, so that *coöperation between the layman and physician is made a reality.*

PHYSICAL DIAGNOSIS IN CHILDREN.*

ROBERT H. McBRIDE, M.D., Sioux City

When the Committee asked me to talk on physical diagnosis in children, I thought they had in mind the differential diagnosis of various clinical conditions as they arise. On further communication with them I found that they meant physical examination of children rather than physical diagnosis.

Presupposing that the proper examination of any child will result in at least a relative diagnosis, I think there is no part of the practice so sketchily

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Editor's Note: This article was presented with a motion picture film of children and their reactions, taken in Dr. McBride's office.

done as the examination, that is, the routine, complete examination of children. I have taken this opportunity of demonstrating what seems to me a complete examination of a child.

It would be impossible to take a child up here and be certain that it would coöperate, so at the suggestion of some of my friends I made a moving picture of such an examination, and we will run through that.

In the beginning it is necessary that a child be in the proper frame of mind before it can be properly examined. You will find it much easier to examine a child of two to five years of age if you place in the examining room something to make him feel comfortable and at ease.

Another thing, if a child has to wait in the examining room a while, he will come to you much happier than if left in a state of turmoil on the mother's lap for half an hour while waiting to see you.

In examining a child there are certain things that should be considered. In the first place, a comprehensive history should be obtained. That history should be written down, because you will refer to it many times during the life of the child.

The child should be inspected thoroughly. The clothing should all be removed. There should be palpation of the skin, hair, flesh, head, heart. There should be deep palpation in the abdomen, the spleen and liver, auscultation of the heart and lungs, and examination of the ears with the otoscope. I think that is one of the things most frequently neglected. Any child running a temperature for any cause should at least occasionally have the ears examined carefully to determine if there are signs of a developing otitis media.

Examination of the throat may be done very readily if the child is securely held and the tongue pressed down. Blood count, nose and throat culture, lumbar puncture, urinalysis and stool examination should be done when necessary. It is not necessary, when a child comes in for feeding examination, to make all those laboratory tests.

In examining the child, put him on a suitable table, or on the mother's lap, and strip him completely, because you will find things that would have escaped you if you tried to examine the child with part of his clothing on. There is no difficulty in examining children of this size if you can get them in the proper frame of mind and handle them carefully.

Feeling of the skin will give you a good deal of information as to the state of nutrition of the child. Feeling of the head for cranial tabes, the size and shape of the fontanel, feeling of the chest, getting the tactile fremitus and the thrills, all are important. Feeling of the spleen frequently

gives you the first indication of congenital syphilis. Feeling of the abdomen will reveal any masses which may be present, fecaliths, or other abnormal masses. Feeling of the glands of the child will often give you a great deal of information as to the presence of an infection and its location. I think that is one thing we do not do sufficiently. We do not feel our children for the texture of the skin, muscles, and subcutaneous fat.

A complete examination of the chest can readily be done in these little infants, and can be done much more easily if they can be kept from crying. A very serious effort should be made to keep the child happy. If the child is not afraid of the doctor before he is brought in for examination this can usually be accomplished.

A complete examination of the heart and lungs should be made. This is much more satisfactory if the child can be kept still. Many times it will be of value to give the child something to play with during the course of that examination, and often it is necessary to interrupt the examination from time to time.

The child in a sitting position, slightly forward, is in the best position for auscultation of the lungs. A great deal of information can be gained if a child is crying, but it is much more happily done if a child is comfortable.

In the percussion, one can determine with a fair degree of accuracy, the size and shape of the heart. You get about the same information as regards the density of the lung tissue as you do in the adult. This examination must be made systematically so that the complete chest is covered.

Again, the child in a slightly forward position is easily held. If you will percuss the chest you will get a great deal of information as to the size of the mediastinal glands, dullness being increased with increase in the size of those glands.

In examining the nose and throat, one may either use the head mirror with the reflected light, or an otoscope, which can readily be carried into the home. It is not feasible to carry a head mirror when you are seeing a large number of children at home. The examination can be done very satisfactorily with an easily carried hand otoscope.

In examining the child's nose and throat, if the head is held securely and the tongue stick pushed far back on the tongue, a fairly good view of the throat may be obtained and cause the child little discomfort. It cannot be done as readily as in an older child, however.

As I mentioned before, the examination of any child with fever is incomplete without an examination of the ears. In watching any condition in which there is febrile reaction, the ears should be looked at at least every two or three days, because

many times an otitis media will develop during the course of an upper respiratory infection.

In taking blood from a child for analysis, the ear has been the site of choice for many years. It always seems to me it is much easier to take it from the toe or the heel, because these areas bleed very readily. Then the child is not so apt to be frightened during later ear examinations.

The otoscope is perfectly suitable for examining the ears in the home. There is an easy method of holding a child still. The mother puts it on her lap and holds it snugly up against her. You push the child's head against the mother's chest, and you can see its ears very readily. The mother and child are both perfectly comfortable. The child will cry, as a rule, because of being held still, but it is not hurt at all.

You use the same method in examining the throat. If the head is pushed back a little, the throat is exposed a little more readily. The child does not enjoy the procedure, but there is not a great deal of discomfort. With this same instrument you may examine the inside of the nose by putting on the large adapter. You can see back into the nose very well.

In the home or in the office, when a child is afraid of the examining table, if the mother places the child over her shoulder you can examine the chest as easily as you can on the table, and get as good results. The same is true of percussion. That is a very suitable position in which to place a child for a chest examination.

In examining the front, simply turn the child around and push it back against the mother. If the hands are not held too securely during the examination the child will cry much less frequently. It is usually because a child is held still that he cries and objects to the examination.

If a child is given such an examination with care and is not frightened before he comes in, he usually leaves in a pretty good frame of mind.

There are a few special examinations that are indicated at times, for instance a lumbar puncture. A child should be stripped down to the waist and flexed. With regard to the choice of a needle, if you take a small needle with a short bevel you can puncture the child easily. Then there is a much shorter distance for the fluid to come from the spine out to the end of the needle, and you do not go through and transfix the cord nearly as frequently as you do with a long needle. That is a harmless procedure and should be done much more frequently.

In taking blood for any test in which a quantity is required, if you take it from the exterior mall-colar vein you can get it much more readily than

from any other part of the body, and can hold the child more firmly.

I think that concludes the method of examination, with the exception of the nose and throat culture. If the child is held firmly against the attendant, the nose and throat may be cultured without any distress whatever to the child. If a few culture tubes are carried in the car at all times, a great many more children will be cultured, and many more early diagnoses of diphtheria will be made.

Just reviewing the things I have mentioned: The first thing, I think, in the examination of the child is to get it in a good frame of mind so that it is neither frightened nor cross.

Take down an adequate history, and write down the main points.

Palpation of the tissue, auscultation, percussion, and examination of the ears, nose and throat are the things that are usually avoided because they disturb the child.

Blood counts, urine examination and lumbar puncture, should be made whenever necessary.

I think if we give each child a careful examination, the matter of diagnosis in childhood will be very greatly simplified.

THE DIAGNOSIS AND CLINICAL CHARACTERISTICS OF PULMONARY TUBERCULOSIS IN CHILDREN*

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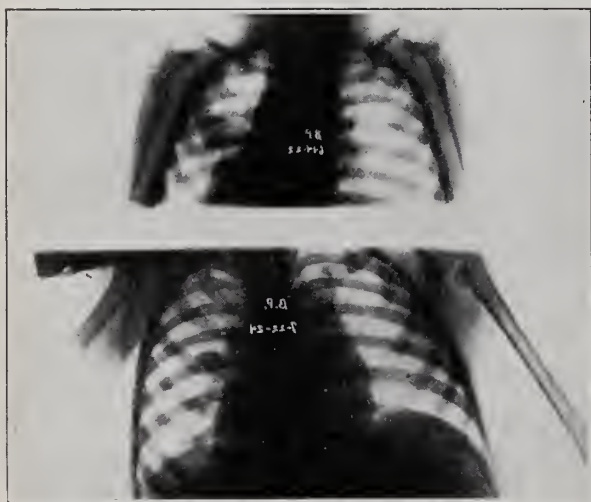
With respect to specificity and sensitivity, the Mantoux and von Pirquet tests are practically unexcelled, and no diagnostic procedures are known to medical science which equal their efficiency and accuracy in sifting the infected from the uninfected. A positive cutaneous reaction to tuberculin alone, without further examination, identifies the positive reactor as having the type of tuberculosis which results from the first infection by the tubercle bacillus, regardless of whether the patient manifests clinical symptoms or not. In other words, all patients who have a positive cutaneous tuberculin reaction have a focus of primary tuberculosis within their bodies. This focus can be found by careful autopsy in over 95 per cent of such cases, and is located usually but not exclusively within the thorax. Upon x-ray examination of children who have tuberculosis of first infection and who are rendered allergic thereby to tuberculin, a variety of conspicuous and unmistakable lesions is found in about 25 per cent of this group, which definitely identify the focus

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of tuberculous disease produced by the first infection these children experienced. In an additional 25 per cent of infected children chest films reveal suspicious but less definite lesions characteristic of primary tuberculosis, but in fully 50 per cent of infected children chest films are entirely negative. Regardless of whether or not the roentgenogram reveals intrathoracic pathology, all children who have a positive tuberculin reaction are clinically identical, in that each positive reactor has primary tuberculosis, or tuberculosis of the childhood type. This disease in itself is relatively benign, but unfortunately alters the normal immune reactions of the human body in such manner as to predispose its victims to the development of consumption, should they later experience a

anorexia, and weight loss. These alarming symptoms may last for few or many weeks, but if further infection is prevented, the most extremely ill infants and children finally show gradual and progressive improvement, and when all clinical signs of primary tuberculosis have eventually disappeared, x-ray examination frequently reveals the continued presence of extensive symptomless pulmonary infiltrations.

The evolution of the primary tuberculosis as it ordinarily occurs in the human lung following a massive initial infection by the tubercle bacillus, is admirably revealed by serial x-ray examinations. Such studies demonstrate the earliest stage of the childhood type of tuberculosis as extensive parenchymal pulmonary infiltrations which in time slowly pass through successive stages of resolution, to be replaced eventually by relatively inconspicuous calcified intrathoracic scars. These parenchymal and calcified lesions merely represent early and late stages respectively of that rather definite clinical entity designated as primary tuberculosis, or tuberculosis of the childhood type. The following ten infected cases which are presented as illustrating the evolutionary process characteristic of primary tuberculosis were selected from a series of over 9,000 children examined at the Lymanhurst School for Tuberculous Children, where repeated examinations of the same individual year after year have revealed not only the manner in which children react to the first infection by the tubercle bacillus, but also how these infected children fare later so far as tuberculosis is concerned.



Showing diffuse acute inflammatory parenchymal infiltration in the left upper lung field, due to a primary tuberculous infection of a child eighteen months of age; and also the calcified Ghon tubercle to which this lesion had been reduced two years later.

reinfection by the tubercle bacillus in dosage sufficient to produce an intrapulmonary lesion. As to whether or not the patient has consumption, a positive tuberculin reaction gives absolutely no information. A positive test justifies solely a diagnosis of primary tuberculosis, and places the positive reactor in that group of individuals from which consumptives are contributed if successful reinfection occurs. A definitely negative tuberculin reaction in individuals who are not acutely ill, is exceedingly reliable evidence that they have no form of tuberculosis whatsoever.

Primary tuberculosis ordinarily is so benign that few of the infected know when they developed a positive tuberculin reaction. At times, and especially during early infancy when primary infections are apt to be received in massive dosage, severe, acute symptoms may be manifested, such as cyanosis, stridor, dyspnea, high fever, cough,

The first case submitted for your consideration was discovered in 1923, when this girl was two years of age, at which time the x-ray film revealed extensive homogenous bilateral infiltrations that persisted for many months. Later these parenchymal consolidations resolved, to be replaced as shown on the film taken in 1931, by bilateral apical Ghon tubercles associated with calcium deposits in the hilus glands. Now, nine years after the first infection occurred, this patient is in excellent nutrition and is enjoying good health.

Another example of the early stage of primary pulmonary tuberculosis was discovered in a baby eleven months of age, who had a conspicuous homogenous infiltration in the right middle lung field, in spite of which, as shown by her photograph taken at this time, she manifested no evidence of illness. This case illustrates how little the general health of infants and children may be impaired at the time extensive pulmonary infiltrations of primary tuberculosis are present within the lung. A film taken two years later shows a partial resolution of the parenchymal infiltration

and the appearance of calcium deposits in this area, giving unmistakable evidence of an early developmental stage in the formation of a typical Ghon tubercle.

The next patient, in 1922 was found to have conspicuous infiltration in the left middle lung field at the age of eighteen months, which two years later was replaced by a large calcified Ghon tubercle (see illustration). For the past eight years this Ghon tubercle has remained unchanged, and today the patient is a healthy, robust girl.

The fourth case presented as illustrating the early parenchymal stage of primary pulmonary tuberculosis was first seen in 1926, at which time an inconspicuous lesion was revealed by x-ray examination in the right lower lung field, the site of which in 1931 was occupied by a well calcified conspicuous Ghon tubercle.

In 1924 another similar case was found with an inconspicuous parenchymal infiltration in the anterior left second interspace, which by 1930 was reduced to three small Ghon tubercles.

I now wish to present an accidental finding in an apparently well boy two years of age, examined in 1925, in whom the x-ray examination revealed a large homogenous shadow on the right. Although this experience was a surprise to me seven years ago, today I know that during the childhood and infancy the presence of practically symptomless extensive intrapulmonary consolidations of primary tuberculosis is more common than the presence of similar conditions producing conspicuous signs. In 1930 the only remaining evidence of the infiltration present five years before was a very small insignificant calcified scar.

The seventh patient included in this report had a parenchymal infiltration around the right hilus region in 1924, which as revealed by the x-ray examination in 1932, is replaced by a large calcified gland.

As revealed by a chest film taken in 1930, this next patient when nine years of age had a conspicuous Ghon tubercle in each lung field. On the basis of past experience, and knowing the type of parent lesion which ordinarily produces a Ghon tubercle, one no doubt would be justified in assuming that this patient at some previous time had a bilateral parenchymal tuberculosis of first infection. We succeeded in finding an x-ray film taken of this child when two years of age which revealed the bilateral parenchymal lesions. These were reduced eventually to the inconspicuous scars just mentioned.

In the next case an extensive parenchymal lesion was found by x-ray examination on the right side when the patient was seven months old and her sister, two years of age, had an infiltra-

tion extending laterally from the left hilus. Tubercle bacilli were obtained by gastric lavage in these two cases. Subsequent films of these children have not been taken, but on the basis of experience with similar and more severe cases I feel it safe to predict that these lesions will resolve in time and leave calcified scars.

The above ten cases illustrate the evolution of the lesion of primary pulmonary tuberculosis as it occurs in children who have experienced a heavy infection. The same process no doubt takes place in every child following the first infection of the lung by the tubercle bacillus, but where the infective dose is small the inflammatory reaction is proportionately small. This may account in part for the fact that in the majority of children who have primary tuberculosis the x-ray fails to reveal the site of the tuberculous lesion. The examples of extensive primary pulmonary tuberculosis are found most commonly during infancy, during the age period when resistance to tuberculosis commonly (and possibly erroneously) is thought to be rather weak. The experience at Lymanhurst, however, indicates that uninfected infants and children are endowed with excellent natural power to withstand a severe first infection, for during the ten years the follow-up study of infected children has been in progress, no deaths have occurred as a result of primary tuberculosis.

At the time Lymanhurst first opened ten years ago, I was of the opinion that a positive tuberculin test (result of primary infection) was beneficial and protective to a child. Follow-up observations of children known to have been infected in the past, however, have altered my opinion on this point and now I feel that it is from these cases of primary tuberculosis our consumptives are derived, when successful reinfection occurs.

One of the cases which leads me to feel that a primary infection is detrimental is illustrated by a girl who in 1926 had a positive tuberculin reaction, and a negative stereoscopic chest film. Five years later, while attending class at high school, this patient had a sudden pulmonary hemorrhage, and on x-ray examination a lesion of adult tuberculosis with a small cavity was found in the right subapical region. This condition has confined her to bed the past eight months, whereas her first infection, acquired five or more years ago, did not cause a single day of noticeable illness. In this case primary tuberculosis had failed to protect her from developing consumption, and also denied her the opportunity of experiencing the benign childhood type of the disease following the reinfection which occurred subsequent to 1926.

Another child was seen in 1928 who had pri-

mary tuberculosis, as indicated by a positive tuberculin test and x-ray evidence of definite calcification of a hilus gland on the left side. A chest film taken in 1930 revealed the appearance of a new parenchymal infiltration of the adult type of tuberculosis in the left subapical region, and at the time this newly developed lesion appeared there was no x-ray evidence that it developed as a result of renewed activity in the region of the calcified primary focus. This patient died shortly of consumption. In this instance we see another patient who successfully overcame her first infection without being ill, but failed to conquer her second infection. Does this observation show that the human body can experience the benign primary type of the disease only once, and thereafter is doomed to develop phthisis if successful reinfection occurs? I suspect such to be the truth of the matter.

The next case I wish to present was seen in 1930 at which time a definitely calcified hilus gland was discovered by x-ray examination on the right side, identifying the site of the patient's primary tuberculosis. The same film also shows the adult type of tuberculosis with a large cavity on the opposite side which resulted in death in a few months. There is no evidence on this film of renewed activity in the region of the calcified primary focus on the right side indicating that the adult type of lesion in the opposite lung resulted from a reinfection rather than arising from a breaking down of the old calcified lesion. Here again we see evidence that the first infection not only failed to prevent the development later of consumption, but also denied the patient the opportunity of developing the relatively benign type of tuberculosis when successful reinfection occurred.

Another child whose case I wish to submit was seen in 1922, at which time the x-ray revealed conspicuous and definite calcified hilus glands on the right side identifying the site and stage of evolution of his primary tuberculosis. His tuberculin test was strongly positive, and his lesions were so well calcified that the Lymanhurst staff felt that this boy had a protective immunity to tuberculosis and probably was in little danger of developing the disease. Nine years later we found we were mistaken in this opinion, for upon x-ray examination in 1931 the calcified scars of primary tuberculosis were present and unchanged on the right side, but an extensive adult type of tuberculosis was found in the opposite lung and this boy recently died. Here again the first infection had failed to prevent the development later of consumption, and the new lesion, instead of being benign like the primary lesion, proved to be of

the fatal adult type of tuberculosis. Experiences such as these show that primary tuberculosis fails to protect one from developing phthisis later, and indicate that the first infection by the tubercle bacillus prepares the individual for the development of consumption when successful reinfection occurs. To me, the Lymanhurst studies indicate that the human body can reduce a tuberculous infection to a calcified scar only once, and if reinfection occurs later in sufficient dosage to produce an intrapulmonary lesion, only one type of tuberculosis can result, namely phthisis. If this opinion is correct a primary infection must be looked upon as being distinctly detrimental in that the soil is prepared thereby for reinfection to result in consumption.

An additional case of extensive bilateral phthisis is presented and in this instance the x-ray examination not only showed the adult type of tuberculosis but also an old calcified Ghon tubercle at the right base. Here again is evidence that the primary tuberculosis had failed to protect this patient later from developing consumption.

Recently an extensive adult type of pulmonary tuberculosis was found in a mother of four young children, and upon x-ray examination extensive parenchymal infiltration of primary tuberculosis was found in each of the children. Although the mother died recently the four children are doing nicely, due probably to the fact that they are suffering from their first infection, which is usually benign. This family provides remarkable evidence of the communicability or contagious feature of tuberculosis.

The last case is presented to illustrate that primary tuberculosis is not limited to the thorax. In this case the x-ray examination demonstrated conspicuous calcium deposits in the cervical lymph nodes. Primary tuberculosis, although involving intrathoracic structures in the great majority of cases, no doubt may occur in practically any portion of the body, and notably in the cervical and retroperitoneal lymph nodes.

In conclusion, may I be permitted to present the following statements for your consideration?

1. A positive cutaneous reaction alone, without further examination, justifies a diagnosis of primary tuberculosis or tuberculosis of the childhood type.

2. The early stage of the clinical entity designated as primary pulmonary tuberculosis is revealed by the roentgenogram as parenchymal infiltrations which later tend to resolve and disappear.

3. The late stage of primary tuberculosis is represented by relatively inconspicuous calcified scars.

4. These varied parenchymal and calcified lesions constitute merely different stages in the evolution or healing of primary pulmonary tuberculosis.

5. Primary tuberculosis as a rule is benign, its prognosis is good in early infancy as well as later, and the human individual can experience this benign type of the disease only once.

6. If new tuberculous pulmonary lesions develop in an individual who previously has experienced a primary tuberculosis, these new lesions are characteristic of phthisis.

7. The first infection by the *Mycobacterium tuberculosis*, instead of being beneficial, is detrimental in that it prevents the individual thereafter from again experiencing the benign primary type of the disease. Under these circumstances, if reinfection occurs in sufficient dosage to produce an intrapulmonary lesion the patient becomes a consumptive.

8. I recommend that you use the tuberculin test to discover those among your clientele who have primary tuberculosis, and resort to the x-ray film particularly to discover those in the infected group who have phthisis in its incipient stage.

9. A complete and adequate examination for tuberculosis requires the following steps, arranged in the order of their relative importance:

- (a) Tuberculin test.
- (b) X-ray examination.
- (c) History and temperature record.
- (d) Physical examination.
- (e) Laboratory examination.

10. If all physicians of Iowa will use this plan to survey their patients this state will soon be safe for your population through certification in the same manner that protection is now given cattle.

11. Lastly, I wish to state four fundamental laws which I believe are true of tuberculosis:

- a. Tuberculosis due to first infection is a benign disease.
- b. The human body can overcome and reduce a tuberculosis infection to a primary complex only once.
- c. The first infection by the tubercle bacillus never produces phthisis.
- d. Consumption develops exclusively following successful reinfection of individuals who previously have experienced a primary tuberculous infection.

Discussion

W. R. Brock, M.D., Sheldon: About two years ago at the meeting of the Iowa Tuberculosis Association, held in this city, Dr. Myers of Minneapolis made the tragic statement that there are thousands of diseased chests among children, and that the disease is undetected by either the parents or the physician. If Dr.

Myers' statement is true, then all children's chests should be indicted for disease until careful examinations prove them to be free from disease.

Chester A. Stewart, M.D. (closing): I want to express my appreciation of the way you received what I had to say, and to add this one point: The Swedish Hospital in Minneapolis ran a survey in January, 1932, during which period every patient had a tuberculin test, and all positive reactors were x-rayed. In this survey we discovered seven cases of tuberculosis with diagnosis quite foreign to the pulmonary condition which was revealed.

I believe if you will survey all patients going through your offices, regardless of symptoms or complaints, you will have many outposts through the state which will sift the tuberculosis out of the community very rapidly through the discovery of patients with unrecognized tuberculosis who are spreaders of the disease.

The only way I know to diagnose tuberculosis at a stage when you can do anything for it, is by means of the tuberculin test, followed by x-ray, whether the patient is one or ninety years of age.

CONTROL OF SMALLPOX AND DIPHTHERIA IN IOWA*

MARTIN D. OTT, M.D., Davenport

SMALLPOX

It may be said that Jenner was the founder of preventive medicine. Vaccination is now more than one and a quarter centuries old and one of the world's greatest scourges had been conquered long before the discovery of the bacterial etiology of contagious diseases. It is needless to say to a group of physicians that vaccination has stood the test of time. That its merits should even have to be discussed after such a record of achievement is but to emphasize that tendency of mankind to forget the means whereby the end has been attained.

To the average individual of the present generation smallpox holds no terrors and our greatest danger at the present time lies in the indifference of the average citizen to what may be truthfully called a growing menace. Possibly it will startle you to know that smallpox has increased in the state of Iowa from 872 cases in 1924 to 3,044 cases in 1930.

Possibly even this will not disturb your equanimity. Possibly you will even partially agree with some of your lay friends that vaccination is almost as bad as the disease. Lest you may assume such an indifferent attitude allow me to remind you that smallpox may still be a very serious disease.

You are probably all familiar with the catas-

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

trophe that occurred in the state of Minnesota in 1925. I am indebted to Dr. A. J. Chesley, the executive officer of the Minnesota Board of Health, for the following data:

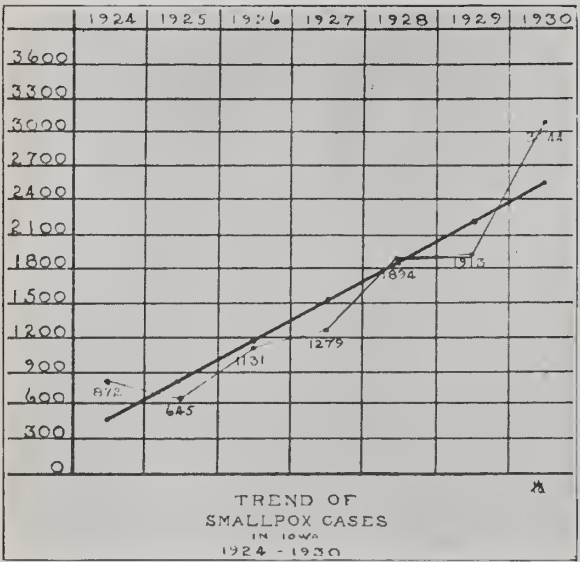


Fig. 1.

Smallpox in Minnesota

From January 1, 1924, to August 31, 1925		
	Deaths	Rate

Total number of cases of smallpox (Mild and malignant)	4,041	504
Malignant	1,941	493 25.4

Smallpox in Windsor, Ontario, 1925

	Deaths	Rate
Number of cases.....	67	32 47.7

The part that epidemics play in encouraging people to be vaccinated is known to all of us and is well illustrated by the following figures:

Number of cases of Smallpox in Minnesota	
1921-1923	4,532
1924-1925	4,041
1926-1928	179
1928-1930	311

The value of compulsory vaccination as practiced in a number of the states is clearly shown by the following table (Fig. 2), from a bulletin of the Illinois State Department of Health. (The figure inserted shows the number of cases in Iowa for the same year.)

These statistics demonstrate that vaccination is the sole means of controlling smallpox. Inasmuch as the quarantine regulations are practically uniform in all states it is apparent that quarantine in itself is not an effective means of controlling the disease. In fact I am of the opinion, and this opinion is shared by many, that if quarantine regula-

tions were removed we would have less rather than more smallpox.

Quarantine gives to the cultists, the "anti's" and to the indifferent a false sense of security which they otherwise would not have. They are depending upon quarantine instead of vaccination for protection. If they could be made to realize that the responsibility lies with them and not with the state or city their attitude would be entirely changed.

It would seem that the effective control of smallpox would require the employment of one or more of the following methods:

1. Compulsory vaccination is the most effective means. It is doubtful if such a law could be passed in Iowa.
2. Removal of quarantine, except in the presence of an epidemic of the malignant type, with

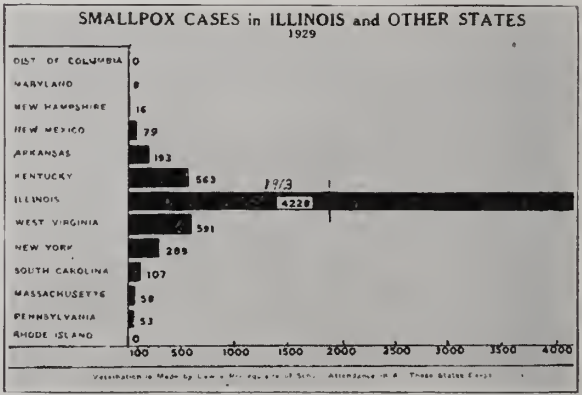


Fig. 2.

the placing of the responsibility upon the individual, would be the second most effective means and might be feasible.

3. A campaign of education through lay and medical agencies and ultimately through the activities of the family physician is the means at present available.

DIPHTHERIA

We now come to the consideration of a more pleasant situation, namely the control of diphtheria. There is no more interesting chapter in the history of preventive medicine than the successful conquest that has been and is being waged against this dread malady. It is peculiarly interesting for the reason that it has all been done within the memory of some of the men in this audience. It is a modern achievement. To some of us of the younger generation it is difficult to realize the progress that really has been made.

Dr. W. H. Park* in a recent article entitled "The History of Diphtheria in New York City,"

* Park, W. H.: The history of diphtheria in New York City. Am. Jour. Dis. Child., xlii, 439 (December) 1931.

states that the average death rate up to 1895 was about 150 per 100,000, reaching as high as 280 per 100,000 in some years. When one compares this with a death rate of 2.8 per 100,000 in 1930, one cannot but be profoundly impressed.

Diphtheria, unlike certain other diseases, has not decreased in virulence. It is still as deadly a dis-

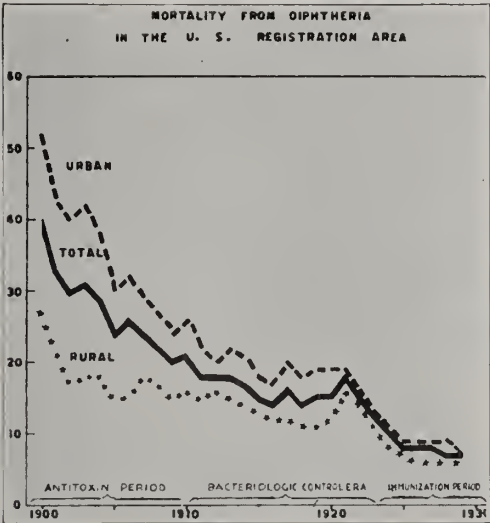


Fig. 3.

ease as ever. The ratio of mortality to morbidity has changed very little since antitoxin has been universally used. The reduction of mortality depends upon early recognition and treatment.

It is an insidious disease. Its onset is not violent and alarming and in this fact the danger lies. Physicians often are not called until it is too late.

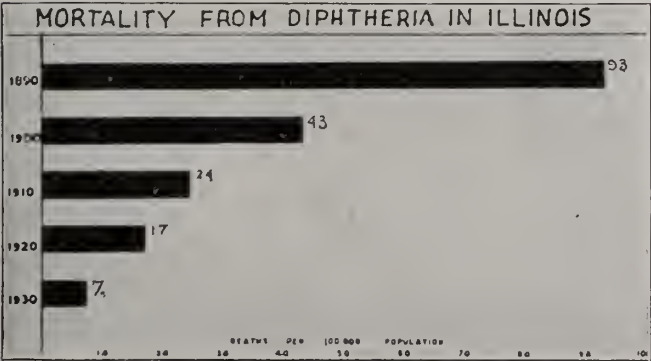


Fig. 4.

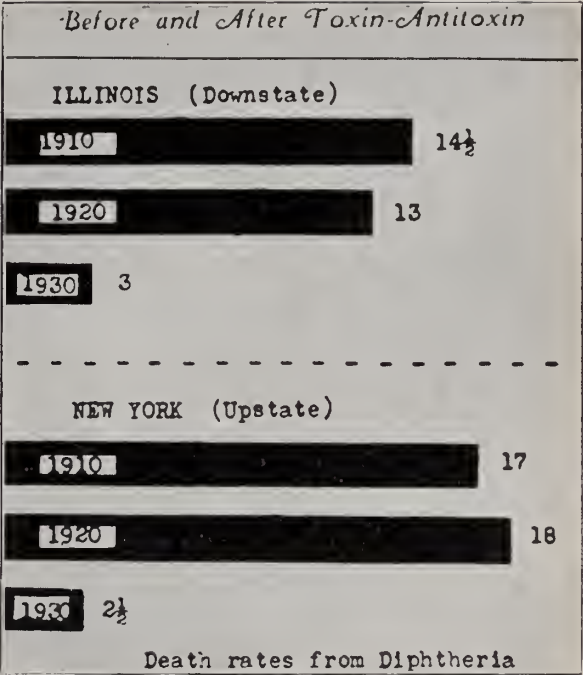


Fig. 5.

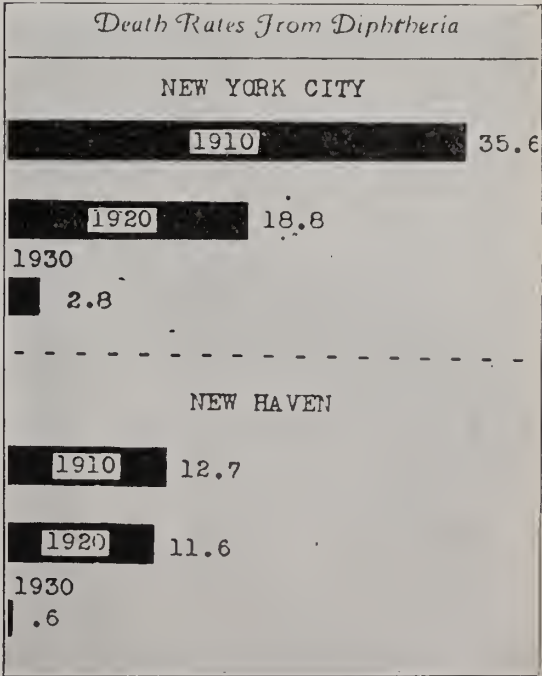


Fig. 6.

Furthermore the carrier problem is almost insurmountable. It must be apparent to any student of the problem that our only hope for eradication of this disease lies in active immunization.

To Dr. Park and his associates belongs the credit for the practical development and populari-

(Figures 3, 4, 5 and 6 from a bulletin of the Illinois Department of Health.)

zation of toxin-antitoxin.* It was first introduced on a large scale in New York City in 1920. The

* The term toxin-antitoxin is used in a generic sense to include both toxin-antitoxin and toxoid.

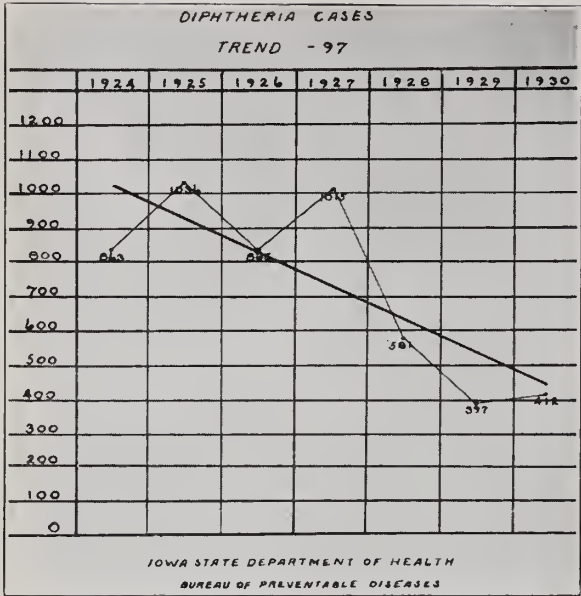


Fig. 7.

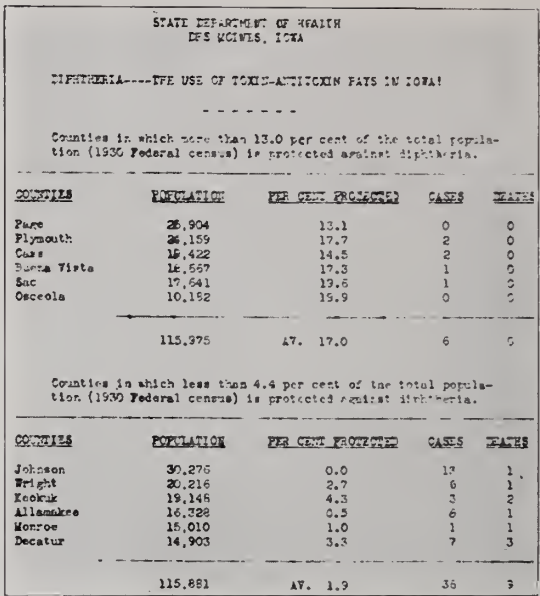


Fig. 9.

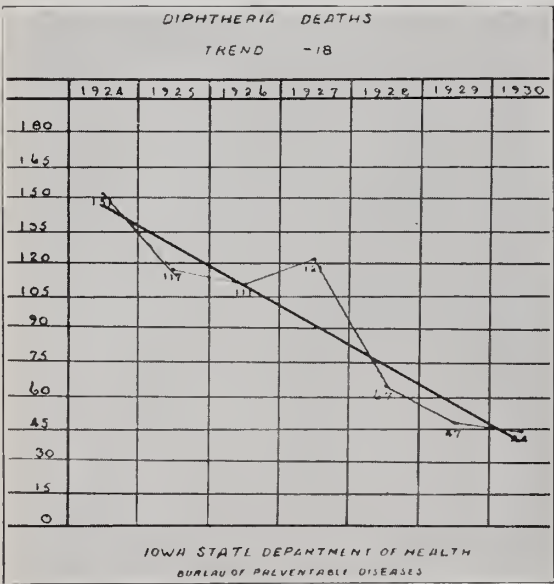


Fig. 8.

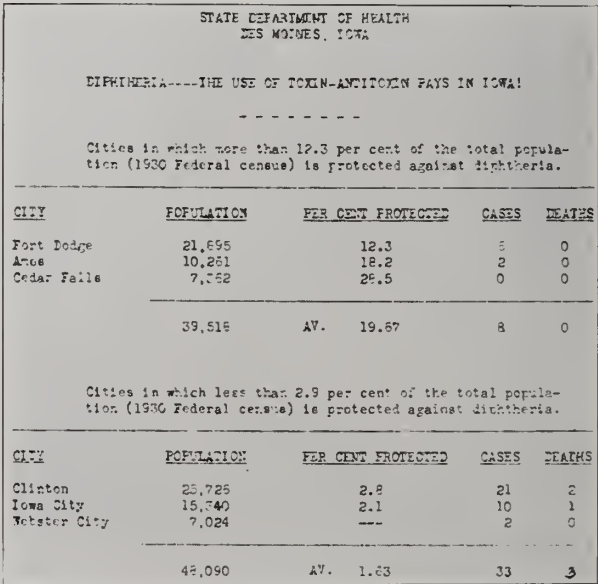


Fig. 10.

(Courtesy of the Iowa State Department of Health.)

effect of its use is becoming increasingly manifest and I shall in a series of slides show you the effect on the reduction of the incidence of the disease. The evidence for the value of active immunization is most convincing. It can no longer be doubted that it is a simple, safe and effective means of preventing diphtheria.

From an economic viewpoint Dr. Lanpher has shown that if we allow \$1,100 as the cost of raising a child to the age when he is likely to die from diphtheria, the saving to the state of Iowa

in 1929 over the average year of 1920-1924 was \$320,000. When one compares this with \$7,000, the amount spent by the department for diphtheria prevention work, it will be seen that the saving effected by this expenditure is almost fifty times the amount spent by the state.

New York City last year saved \$280,000, as compared to 1927, merely in the cost of caring for diphtheria patients in the contagious disease hospitals.

One cannot doubt that diphtheria prevention

pays not only in health and happiness but actually in dollars and cents.

If we grant that immunization is necessary we are still confronted with the problem of how it is to be undertaken. The method must be popularized. The public must be convinced that it is a simple, safe and effective means of controlling the disease. It has seemed wise in the past to conduct public demonstrations in the schools and through charitable organizations merely to convince the public of its merits. It must be granted that much good has been accomplished, but so successful have these demonstrations proved that some of the socially minded individuals within and more particularly outside the profession have conceived the idea that this is the proper method of handling the situation. It has been an excuse for some of our parent-teachers' and visiting nurses' associations to gratify their mania for holding clinics. Conceding that they have accomplished some good in the past, it must be remembered that these clinics are merely demonstrations. The problem is essentially a medical problem for medical men and the initiative in this movement must not be surrendered to lay organizations.

In our county a few years ago the proposition of holding such demonstrations on a city-wide scale was put up to the medical society. They agreed to conduct it with the provision that this was to be done once and once only. Our medical society is so organized that no doctor or group of doctors can conduct free clinics under any auspices without the sanction of the society. In this way we feel that we have some check on the matter. I think that some such plan should be adopted by every county in the state.

I believe that every county society should adopt some definite program and see that it is carried out. Where public demonstrations are necessary they should be held but it should be distinctly understood that they are merely demonstrations. I have no sympathy with free clinics except for the indigent. Inasmuch as we shall always have the indigent with us we shall always have enough material for demonstrations.

Granting the necessity in some communities of public clinics we cannot escape the conclusion that the problem is ultimately one for the family physician. It is to him that we must look for the performance of this task.

By means of the Schick test it has been shown that the greatest susceptibility to diphtheria is between the ages of six months and twelve years, reaching the maximum about the age of four years. In other words, the greatest susceptibility is during the preschool age. Statistics show that the

greatest reduction in morbidity has been in the age group of five to ten years. This can be attributed to the fact that most of the immunizations have been done on school children. Inasmuch as the immunization is probably permanent it requires no great acumen to realize that the best results can be obtained only if the immunization is done during infancy. If the family physicians were performing their duty, there would be no necessity for school demonstrations and incidentally it would not be long before a sufficiently large proportion of the population would be immunized to practically eradicate the disease.

While the majority of physicians are in sympathy with this movement their attitude has been a passive one. They immunized the children if the parents requested it. Without such request the children were not immunized.

It is becoming increasingly less difficult to persuade the parents to consent to this procedure. The wonderful advertising campaigns being conducted by such organizations as the Metropolitan Life Insurance Company, Parke, Davis & Company and others are bearing fruit. The Metropolitan Life Insurance Company spends annually \$100,000 for magazine advertisements for diphtheria and smallpox prevention alone. They know that it pays.

It may be said that it is more difficult in the rural communities than in the cities. Possibly it is, but remember that the farmer's wife reads the same magazines and papers as her urban sister.

I suspect that the fault lies not so much with the parents as with the physicians themselves. If the physicians would state this proposition with only a modicum of the persuasive ability used in obtaining consent for an appendectomy or cholecystectomy it would not be long before diphtheria would be practically eradicated.

Every physician should make it his duty to advise the parents of every child under his care of the necessity of diphtheria prevention.

Allow me in closing to state that I believe that individually and collectively the physicians must take this proposition seriously. The diphtheria prevention work is going to be carried on. If we do not as private physicians initiate and promote this work then we cannot legitimately protest if social and public agencies do it. If we resent the encroachment of such organizations upon our prerogatives we must anticipate the necessity for their activities. In other words, it is for us to decide whether we are going to use these social and public agencies or whether they are going to use us. The answer must be obvious.

Discussion

Howard A. Lanpher, M.D., Des Moines: Mr. Chairman, Ladies and Gentlemen: We were very much pleased when we saw the subject of this paper on the program, because while we are pleased also with the results of the campaign for immunization against diphtheria, as shown by the reduction in the number of cases and deaths, the State Department of Health is much concerned with the situation regarding smallpox.

Dr. Ott has shown you on the slides that smallpox is increasing at the rate of 360 cases per year, although the deaths are not in proportion. An average of five deaths per year has occurred during the last four or five years. One item which is very interesting is that the only death which occurred in females during the year 1930 was that of a girl under one year of age. Dr. Plass told me that he makes it a practice to vaccinate children born in the hospital at Iowa City before they are taken off the delivery table. He is a pioneer in that work in Iowa, as far as I know, and he is collecting statistics and filing the results.

Last fall it was reported that there were 140 deaths from a severe type of smallpox in Mexico in one week. Unfortunately for Iowa, in a sense, the smallpox which we have at the present time is of the mild type; it does not kill. The deaths from it are not advertised. But it is only two looks and a halloo, so to speak, from Mexico to Iowa. In five days a man in the incubation stage of smallpox can arrive in Iowa from Mexico, bringing with him the severe type. An unprotected population is always open to the menace of importation of that type of smallpox. I venture to prophesy that Iowa is due for an explosion from the severe type of smallpox at some time.

Vaccination will protect against both types. I think the practicing physician should issue propaganda for the vaccination of children at an early age.

The diphtheria picture is entirely different. Back in 1923 the State Department of Health started a statewide immunization program. You understand, no one from the State Department of Health has ever had a finger in the actual administration of toxin-antitoxin. It has all been done by local physicians, but the campaign as a whole has been sponsored by the Department.

As a result of this, about 450,000 children in Iowa have been inoculated against diphtheria, but those children have been in the school age group. We had to start with that group merely for the purpose of demonstration, and because that was the group which was easily reached and easily controlled. An unfortunate result has come from that necessity. The parents have been taught to believe that it was the children belonging to that age who needed toxin-antitoxin, and we are now faced with the proposition of unteaching the parents concerning that condition and teaching them, instead, that the children of the

preschool group need protection again diphtheria. Diphtheria can be eradicated just as smallpox can be eradicated. We have weapons which will produce that result. The cause of diphtheria is known and also its mode of spread. We have a means of exact diagnosis. We have a specific remedy for treatment, and that same remedy also gives temporary immunity.

We have a reliable test for susceptibility. We have a safe agent for producing lasting immunity. Full use of all these agents would, in a very short time, eradicate diphtheria from Iowa.

As a result of the protection of these 450,000 children, the cases of diphtheria have dropped from 1,026 in 1925 to 509 last year. We expected there would be a still further drop because the previous year, 1930, had only 412 cases, but the last two months saw an increase in the number of cases, and that increase was shared by other states as well as Iowa. The number of deaths, as shown by Dr. Ott's chart, has been reduced from an average of 242 per year for the five-year period previous to the time we put on the campaign, to only 41 last year, a net saving of 201 lives per year from diphtheria.

Since the children who are immunized belong to the school age group, the percentage of cases in the preschool age group resulting in deaths, has increased from 35 per cent before we put on the campaign, to 44.6 per cent, denoting, to our minds, that the children of the preschool age group have been neglected.

The children of the preschool group at present in Iowa may be considered as being made up of the 219,000 children who have been born alive during the last five years. Because we have so few midwives in Iowa it is safe to estimate that at least 90 per cent of these children were attended by a physician at the time of birth.

There are a few pertinent questions. Did these physicians tell the parents that no child need die of diphtheria; that the most favorable time for immunizing children is between the ages of six months and one year; that the baby should be immunized not later than his first birthday; that immunization should protect the child through the period of greatest susceptibility. Did they tell the mother to bring the baby back to the office at a certain specified date? I know one pediatrician who not only specifies the date but he specifies the hour at which the child should come back to the office. Did they immunize these babies at the proper time?

The answer to these questions is "No." Gradually this practice is becoming more frequent among physicians. The belief of the Department of Health is that such a practice should be incorporated by all doctors as a part of the after-care of mothers and children.

INTRACRANIAL HEMORRHAGE IN THE
NEWBORN, EARLY AND LATE
MANIFESTATIONS*E. D. PLASS, M.D., and P. C. JEANS, M.D.,
Iowa City*From the Departments of Obstetrics and Gynecology and of Pediatrics, State University of Iowa*

Birth trauma leading to intracranial hemorrhage is probably the most common cause of stillbirth and neonatal death, as well as a prominent factor in the etiology of puzzling conditions appearing during infancy and childhood. The early symptoms and the later sequelae are still so poorly recognized that there are many failures to make correct diagnoses. In part, at least, these difficulties may be attributed to a widespread belief that intracranial injury occurs only after difficult or instrumental delivery, and to a lack of realization that the early and late manifestations of intracranial birth hemorrhage differ markedly from those occurring in intracranial trauma among adults.

ETIOLOGY

Intracranial hemorrhages during birth are due, in the vast majority of instances, to mechanical factors concerned with the molding of the fetal head during its passage through the bony birth canal, with defective blood coagulation and other blood dyscrasias playing a hypothetical, but probably insignificant, rôle. It is only rarely that the trauma is of such a character as to lead to detectable fractures of the cranial bones. The fetal head, with its open fontanels and sutures, is well adapted to compression and molding, which may be looked upon as usual accompaniments of birth. Normally, this molding is slight in extent and is accomplished gradually with little or no intracranial trauma, although, even in unassisted spontaneous labor, serious, and even fatal, intracranial hemorrhage may occur. More commonly, however, the required trauma follows too marked, too forceful or too rapid molding. Thus, while difficult instrumental delivery assumes an important rôle, other factors are of even greater significance.

There are those who argue that the actual compression of the head during molding is of less consequence than the sudden release of pressure as the head passes through the inlet or the outlet. It really makes little difference which view is adopted, so long as it is realized that the *sudden* passage of the head carries a serious threat to the integrity of the intracranial structures. The fact that intracranial hemorrhage so frequently ap-

pears as the cause of death in stillborn children seems to favor the idea that the compression is the more important factor.

Intracranial hemorrhage usually comes from tears in either the falx cerebri or in the tentorium, with infratentorial bleeding present in most of the fatal cases, and results from unbearable stresses placed upon these membranes. The falx cerebri separates the cerebral hemispheres, being attached above to its origin in the dura mater, and being incorporated below into the substance of the tentorium, which represents a lateral outgrowth of the dura mater. During the birth process, pressure upon the head is usually exerted in such a direction that the moldable cranium elongates in the mento-occipital diameter. This forces the upper attachment of the falx cerebri farther from the base of the skull, puts the falx under increased tension, and makes it drag to an unusual extent upon the tentorium. When breaks in continuity appear in these membranes they tend to spread and sever small branches of the supplying blood vessels. Under normal conditions, these strains come on slowly and are not extreme, so that no tissue rupture occurs but under other circumstances breaks occur and bleeding ensues.

The principal factors predisposing to tears in these essential supporting membranes may be listed as:

1. *Unusually forceful compression of the head*, as in difficult forceps.
2. *Too rapid compression of the head*, as in the precipitate delivery of a previously unengaged head, naturally or after the administration of pituitary extract, or in the delivery of an aftercoming head.
3. *Extreme compression of the head*, as is possible in poorly ossified heads, seen occasionally in full-term children, but more particularly in premature infants.

Difficult forceps, precipitate descent through the birth canal, the aftercoming head, and prematurity, then, stand out as the essential predisposing factors. There is but little evidence that prolonged labor itself offers any special predisposition to intracranial hemorrhage, unless some of the other factors enter the picture.

The fact that spontaneous delivery, and especially precipitate spontaneous delivery, are often responsible for fatal intracranial hemorrhage is too little recognized, the resulting stillbirths and neonatal deaths being attributed to "asphyxia" or to "congenital heart anomalies."¹ During 1931, there were reported 851 neonatal deaths in Iowa, an incidence of 20.0 per 1,000 live births. In 165 instances, it was stated that there had been some operation aiming at delivery, and among this

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

group, birth injury was specified as the cause of death in 118 (71.5 per cent), while congenital heart conditions were noted in only 5 (3.0 per cent). On the other hand, among the 686 presumably spontaneous deliveries, birth injury was designated only 34 times (5.0 per cent), but congenital anomalies of the heart were recorded in 78 babies (11.4 per cent). Any such incidence of congenital heart disease is, of course, completely unreasonable, and a fair assumption would place all but a very few of this group among the birth injuries. It is a general experience, based upon autopsy findings, that from 30 to 50 per cent of all deaths during birth or in the first week of life are associated with, and presumably due to, intracranial hemorrhage. In addition to those deaths which are now incorrectly ascribed as "congenital anomalies of the heart," it seems inescapable that many more are hidden under such diagnoses as "prematurity" and "congenital debility."

There is no way of learning how many intracranial hemorrhages follow the administration of pituitary extract in an effort to hasten labor, since such a practice is not countenanced in maternity hospitals, where the explanation of early infant deaths rests upon the sound basis of autopsy findings, but it is well known that this danger constitutes perhaps the most serious objection to the use of pituitary extract during labor, rupture of the uterus being a more dramatic, but less common, sequel. The adoption of a saner policy in the use of this powerful oxytocic agent would undoubtedly reduce the number of babies who succumb during or shortly after birth from intracranial hemorrhage.

The risk to the child when delivery is accomplished from the breech position arises in great part from the comparative need for rapid delivery of the aftercoming head. Ordinarily, whatever cranial molding is necessary must be completed within a few minutes, and the suddenly increased stresses thus put upon the intracranial structures do not give these supporting membranes a reasonable opportunity to stretch; rather, they tear, and hemorrhage results. Breech extraction and version followed by extraction, according to the data obtained in our recent study of stillbirths in Iowa, carry an almost prohibitive stillbirth rate, and the neonatal death rate is also undoubtedly high. Among 876 deliveries involving the extraction of the aftercoming head, there were 154 stillborn infants, a stillbirth rate of 17.6 per cent, one in every six children failing to survive.

As compared with the dangers of precipitate birth, of birth of the head in the aftercoming position, and of prematurity, the risk to the child in slow labors, in second stage delay, and even in

intelligently performed forceps delivery is quite insignificant. Low forceps delivery, in suitable cases, without undue compression of the head, surely entails only a slight risk, whereas mid and high applications will invariably show a higher fetal death rate. The safest birth for the child is a normally slow, spontaneous delivery. *Speed is more harmful than delay.*

DIAGNOSIS

The usual textbook picture of early intracranial hemorrhage—bulging fontanels, muscular tremors, and convulsions—is so rarely seen, that for practical purposes it is valueless. Other less prominent and less well recognized signs must suggest the diagnosis, especially when any one of the predisposing factors has been present. Babies with *asphyxia pallida* should always be suspected; they are pale and limp, with no muscle tone, and appear to be in shock. *Resuscitation is difficult*, and often, after apparent success, the child's condition becomes rapidly worse and death ensues in spite of all efforts. The appearance of respiratory distress in a child, who seemed quite normal at birth, is significant. In those children who respond well to efforts at resuscitation, muscular tone is regained slowly and the movements are feeble, the respirations tend to be shallow, and there is a weak cry with an expiratory grunt.

Among the later signs, the most important is that the baby does not nurse well, and does not respond normally to sensory stimulation. The high-pitched cerebral cry is almost pathognomonic. Muscular twitchings may be present but are not common, pupillary variations cannot be determined, spasticity and convulsions are rare, and a tight, or bulging, fontanel can be demonstrated only infrequently, but is significant when present. Spinal tap or cisterna puncture offers the only confirmatory evidence available. In early cases, the demonstration of fresh blood in the spinal fluid, and, in later cases, the deep yellow appearance of the fluid are significant. The value of frankly bloody fluid has been debated, but still remains the best evidence we have of hemorrhage, except for the general condition of the child. Certainly when there are other signs indicative of hemorrhage, the finding of blood clinches the diagnosis.

TREATMENT

Prevention is easier than cure, and many intracranial hemorrhages may be prevented by giving heed to avoidance of the predisposing factors. Forceps delivery should be done with respect for the cranial contents, and undue compression should be avoided. Delivery of the aftercoming head should be done slowly and gently, and deliv-

ery from this position should be effected only from necessity and not from choice. Elective version has no place in the general practice of obstetrics, even though an occasional specialist may be able to secure good results after long practice. Pituitary extract should be reserved for the induction of labor and for use after the child has been born. It, and its weak relatives, thymophysin and thyuitary, have no place in the management of labor, if every reasonable attention is to be given to the safety of mother and child. Premature children should be handled with the utmost gentleness, and after birth attention should be given to the three fundamentals in their care—the preservation of body heat, proper food, and protection from infection.

When intracranial hemorrhage is feared because of the circumstances surrounding birth, 15 to 25 cubic centimeters of normal blood (preferably from the mother) may be given subcutaneously between the shoulders, even though the value of such treatment may be debated. On the unproved assumption that lack of normal coagulability of the infant's blood may be a factor in intracranial bleeding, or on the basis of the well known general stimulating effect of such injections, the treatment can be justified. Spinal tap at this stage may have some therapeutic value, but is usually reserved until the appearance of definite symptoms of hemorrhage.

Active treatment, after the diagnosis of intracranial hemorrhage has been made, generally consists of repeated spinal or cisterna punctures at intervals of one or two days until improvement is noted or until death ensues. The accessory use of hypertonic dextrose solution is still in the experimental stage, and we have had no experience upon which to base an opinion of its value. In rare instances, where depressed fractures of the skull have resulted from instrumentation, elevation of the fragment should be effected.

PROGNOSIS

The prognosis in intracranial hemorrhage is bad, except in the very slight cases, where the diagnosis on the basis of observed symptoms is doubtful. Sharpe, and his co-workers, have, however, shown that blood can be demonstrated in the spinal fluids of many babies, who show no other evidence of birth injury, and, on the assumption that such findings indicate intracranial hemorrhage, it must be concluded that a large number of mild cases ordinarily escape immediate detection, and usually lead to no recognizable sequelae. On the other hand, it must be remembered that many young patients coming to the pediatrician with evidences of old intracranial lesions fall into

the group where early symptoms have completely escaped recognition, and where the first signs of trauma appear relatively late in life. At present, there is no way in which these minimal lesions can be recognized shortly after birth.

In stillborn infants particularly and in those who survive birth by only a few minutes or hours, differentiation between asphyxia without gross birth trauma, and those with intracranial hemorrhage has been unsatisfactory. The behavior of children in these two groups is so similar that it has seemed that they must be related. Hemsath and Canavan have recently called attention to the significance of microscopic hemorrhages in the medulla, and have demonstrated such lesions in 34 out of 53 consecutive infants dying during or shortly after birth. In 12 of these babies, other significant lesions were absent, and, except for this study, the deaths would have been classified as due to "asphyxia" or left "undetermined." Such findings lead to the conclusion that the great majority of babies with severe asphyxiation are suffering from gross or microscopic intracranial hemorrhages, which constitute the largest single cause of stillbirths and neonatal deaths.

From the preceding discussion it is apparent that intracranial hemorrhage occurs at birth with considerable frequency and that many babies die as a direct result. We know also that a considerable number of babies injured in this manner at birth survive. One might make the generalization, not always strictly true, that hemorrhages below the tentorium are likely to be fatal while those at a higher level are likely to be more benign. Often gross insults to the nervous system at the higher levels are possible in young babies without terminating life.

When a baby has had an intracranial hemorrhage and survives, the late consequences of the injury are variable and depend upon the size and location of the hemorrhage. In some instances in which the evidence of hemorrhage at birth seems indisputable no disturbances develop later which are attributable to this accident. This is probably true of those cases in which postnatal treatment for the hemorrhage has been given and for those hemorrhages which are small. The sequelae vary from this negative amount through varying degrees of dysfunction up to complete physical and mental disability.

Hemorrhage near the base of the brain may cause damage to the corticospinal tracts and injury to the basal ganglia. Hemorrhage higher may cause meningeal adhesions, scars and other cortical defects. These defects may take the form of atrophy, of sclerosis, of cysts, or of residual

pathologic states having the appearance of chronic meningo-encephalitis.

These various lesions may be the cause of epilepsy, hydrocephalus, mental deficiency, behavior difficulties, athetosis and spastic paralysis. Seldom will all of these conditions be found in any one patient, but they may be present in almost any combination.

When children present definite evidences of having had an intracranial hemorrhage at birth, some of them will be found to have a normal mentality, the proportion perhaps being 20 to 25 per cent. However, nearly two-thirds of the children injured in this manner have mental defects so extensive that education in its usually accepted sense is impossible. Birth injury constitutes a very common cause of mental inferiority.

The behavior difficulties encountered are chiefly those dependent upon hyperactivity, irritability, inability to concentrate and a tendency to antisocial acts. These various difficulties are largely the effect of mental retardation. Distractibility and hyperactivity may be said to be characteristic of birth injury cases, and are found with approximately equal frequency in paralytic and nonparalytic cases.

Tremors and athetoid movements are the result of injuries about the basal ganglia. The patient is capable of making very simple movements, but is unable to coördinate these various simple movements into a useful complex muscular performance. Children with athetosis may have excellent intelligence, but this fact may be overlooked because of the inability to talk or to perform other acts normally expected of one of the same age. Patients with athetosis present no changes in the reflexes unless pyramidal tract fibers have been injured. However, athetosis is frequently associated with paralysis, approximately half of the paralytic cases having this condition.

The common clinical picture presented by the child who has had an intracranial hemorrhage at birth is a spastic paralysis. Probably between 10 and 20 per cent of the crippled children attending an orthopedic clinic are the victims of an intracranial hemorrhage. The cerebral spastic paralysis produced by birth hemorrhage is caused by injury either to the cortex or to the corticospinal tracts. Depending upon the location and the amount of damage, the paralysis may be generalized or it may be limited in extent. In approximately 50 per cent of the cases the paralysis is quadriplegic and in about 30 per cent hemiplegic. In the remainder it is either paraplegic or monoplegic. The paralysis may or may not be accompanied by mental deficiency, athetoid movements or epilepsy. The possible accomplishment by

treatment depends in a large measure upon the possession by the patient of a more or less normal mental capacity. This means that in a high proportion little is to be expected in the way of improvement or relief. It is desirable to emphasize that one's judgment as to mental capacity in these cases is sometimes erroneous and that in general these patients should be given the benefit of periodic muscle training for a time. The degree of coöperation and the rate of progress will then be of assistance in determining the mental capacity.

The conditions which may be caused by intracranial hemorrhage at birth have been reviewed briefly. We know that these same conditions may have other causes. Determination of the etiology is of more than academic interest. When a child with any of the disabilities mentioned is brought to the physician it is desirable to be able to state, if possible, what the cause may have been. If the history indicates a stormy postnatal period with difficult resuscitation, convulsions, disturbed respiration or inability to nurse, the evidence is strong in favor of hemorrhage, even though the birth may have been spontaneous and apparently normal. The evidence is strengthened by the history of a precipitate labor, breech delivery or of prematurity of the infant. Sometimes, however, such a history is lacking. It becomes necessary to realize that the disabilities mentioned may be the result of hemorrhage, despite the fact that the child seemed normal at birth and did not present evidences of spasticity until some months later. In the majority of cases definite evidence of motor disability is not noted by the parents until the time comes when the child should exhibit certain motor performances and fails to do so. He is then brought to the physician with the complaint that he does not sit or walk or talk, as the case may be. In Sharpe's analysis of more than 5000 cases the first signs of the disability became manifest during the last months of the first year in 79 per cent of the patients.

Two factors other than birth hemorrhage have been considered as causes in producing more or less the same defects as have been discussed. These are congenital developmental anomalies and the effects of prenatal toxic or infectious injury. The idea of a developmental defect, or arrest affecting certain systemic areas which concerns cortical cells or myelinization of corticospinal tracts and association fibers is well established in the literature, but it does not seem to be established on the basis of complete histologic examinations. Gross, more or less generalized, developmental defects are recognized. Extreme examples of this are anencephalic monsters and certain of the microcephalic idiots. That we may encounter de-

velopmental defects which give rise to the common clinical picture of cerebral spastic paralysis is debatable.

Excellent authorities are responsible for the statement that encephalitis may occur prenatally and that this disease may be responsible for more or less the same clinical picture as results from hemorrhage. We have no desire to deny this statement, but it is worthy of note that hemorrhage may cause meningeal adhesions and thickenings which are scarcely to be distinguished from lesions which have been described as resulting from encephalitis. In the case of porencephaly opinion seems to have swung markedly from an encephalitic cause to that of hemorrhage.

In Little's first publication concerning cerebral spastic paralysis, practically no notice was given to birth injury as a cause. In a later publication he stated that three-fourths of the cases were dependent upon this cause. The more the condition is studied, the higher the proportion ascribed to birth injury.

While we may not always be able to state with certainty what the etiologic factor may have been in any particular case of spastic paralysis, we do know that birth injury is the cause in a high proportion of cases in which the condition is noted first in infancy. It is probable that birth injury should be diagnosed, at least tentatively, considerably more often than seems customary at present.

NUTRITION AND DENTAL CARIES.*

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The chief interest of most physicians is the treatment of disease. Recognizing this fact, it is hard to understand why the medical profession has had so little concern for tooth decay, a condition which is intimately related to the state of general health. It is a disease in itself; in fact, one of the most prevalent of all diseases. Moreover, it affects not only the teeth, but leads to general and systemic diseases of grave significance, conditions which often result in death or in chronic invalidism. The rôle of dental infection in the arthritides and heart damage is well recognized. Dental focal infection is dependent most frequently upon tooth decay. The physician is familiar also with the digestive disturbances and the resultant ill health which are attributable to teeth that have been so damaged by decay that proper chewing is impossible. Much distress and impairment of efficiency result from this common

condition, to say nothing of the economic and social handicaps imposed as a result of dental decay.

For the past century, since the practice of dentistry separated itself from the practice of medicine, the physician has come to consider disease of the oral cavity as outside his realm. Both dentist and physician have worked to a great extent upon the apparent assumption that the teeth can be divorced from consideration with the rest of the body. Moreover, the concept has been tacitly accepted that the teeth are complete structures, merely housed in the mouth as accessories for chewing, but not subject to the physiologic laws which govern the rest of the body. The recent advances made in the understanding of the causes of tooth decay and its prevention should serve to unite the physician and dentist in a common attack upon dental caries. We have good reason to believe that through such coöperative effort, much can be done to prevent, possibly to eliminate this prevalent disease.

Tooth decay frequently makes its first appearance in earliest childhood. By the time the deciduous teeth are shed, they may have been destroyed to a considerable extent. In a survey of 7,800 Iowa children, Wandell found that the average child of six had eight cavities, with an average of one cavity at that age in permanent teeth. After eruption of the permanent teeth, the latent period before carious destruction makes its appearance may be very brief. Caries usually is less active in the adult and its arrest is not infrequently observed at this period of life. This does not hold in childhood, however. Once decay in any area has developed, the tendency during childhood is for it to progress. The period of active growth seems to predispose to tooth decay. Other periods of strain on the body are associated with a similar tendency; for example, decay is prevalent during late pregnancy and lactation. Some diseases which affect the nutrition are associated usually with a marked tendency toward tooth destruction; examples of these are diabetes, rickets and chronic intestinal indigestion of late infancy. In the latter condition, practically complete destruction of the deciduous teeth, and premature eruption of the permanent teeth have been noted during the third and fourth years of life.

The theories of the causation of dental caries which have been generally accepted until recently have placed the blame upon the effects of certain groups of bacteria. Efforts at prophylaxis have been directed against bacterial growth in the mouth. The futility of such attempts has been demonstrated by the continuance and the progression of caries coincident with and in spite of the most vigorous measures. The English speaking

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ances probably have as high a standard of mouth hygiene as can be found in the world; dentifrices and mouth antiseptics are available in abundance; we are told with confidence that "a clean tooth never decays," and yet there has been no evidence of lessened caries since Miller, in the latter part of the last century outlined the bacterial concept of dental caries.

Miller correlated the observations of his predecessors with his own observations, and concluded that since in the test tube a tooth placed in a culture of acid-producing organisms will develop caries-like lesions, caries as it occurs in the mouth is dependent upon the growth-products of acid-forming bacteria. Subsequent observers have incriminated the lacto-bacillus acidophilus, and many believe today that decay is dependent upon the implantation of this organism in the mouth.

This theory seemed quite adequate to explain the situation until various workers in nutrition began publishing their observations on the increased incidence of dental caries in animals receiving experimental diets as compared with their controls receiving a more general diet. Since that time there has been a growing conviction that in some way, tooth decay was related to diet. This belief has been strengthened by the new knowledge that has been gained during the past twenty years concerning the need of the body for certain substances, some of them heretofore unrecognized, for normal growth and functioning of the body. The proved relationship of rickets to deficiency of vitamin D or of bone-forming minerals, and the dependence of scurvy upon vitamin C deficiency, are but two examples of such relationships of nutrition and health. Students of nutrition have studied the possibilities of the dependence of tooth decay upon deficiency of the diet in certain of the recognized essentials. The Mellanbys, pioneers in the study of rickets and its dependence upon vitamin D, have become convinced that vitamin D deficiency is the important factor in producing tooth decay. Howe, on the other hand, has worked with vitamin C, and feels that it is the important factor. He has shown that vitamin C deficiency manifests itself in the changes produced in the tooth pulp earlier than demonstrable changes can be detected elsewhere.

About six years ago, Dr. Drain, the dentist attached to the Children's Hospital of the State University of Iowa, made the observation that arrest of caries was demonstrable in a group of patients who had been observed by him repeatedly on successive admissions to the hospital. A similar condition had not been seen in other children. The children in this group had come to the hospital at the time of their first admission with active

caries of considerable extent; after intervals as brief as eight weeks it had been noted that the cavities showed no evidence of further decay. The bases of the cavities, which at the outset had been quite soft and permeable, had become stony hard and could not be penetrated by the exploring tine. It was found that all the patients in whom arrest of caries had been noted were children under management for diabetes mellitus; moreover, arrest was demonstrable practically without exception in those children who had been under control for three months or longer. Repeated subsequent examinations of these children have been made, which in some cases have covered a period of over six years. In the great majority there has been no reactivation of the caries, and no new cavities have developed. Large cavities which purposely have been left unfilled for years have shown no evidence of further progress.

It is not possible to attribute this arrest of caries to the diabetes. The disease itself seems to predispose to caries rather than to its arrest. Moreover, studies of non-diabetic children on a similar diet have shown that arrest of decay in their teeth is obtainable in an identical manner.

It might be thought that the character of the diabetic diet is in itself the sole explanation of this observation. The proponents of the bacterial theory of causation of dental decay have expressed their belief that the lessened intake of sweets and starches, employed in the diabetic control, led to a corresponding diminution of bacterial fermentation in the mouth, and thus to lessened caries. Their contention is not supported by further dietary studies of caries. For example, it was found that complete arrest had been produced in children with chronic intestinal indigestion who were receiving therapeutic diets which contained a minimum of fat, adequate protein and the remainder of the calories in the form of sugar. We have postulated on the basis of these observations that dental decay is dependent upon some dietary deficiencies, and that any diet which contains all the recognized essentials for normal nutrition should be adequate to arrest dental decay. Since that time, many normal children have been placed on a supervised dietary which differs in no way from the foods recommended as being desirable for normal childhood nutrition, and arrest of caries has resulted. It has been found that if the child actually eats the foods of the character and in the amounts prescribed, the bases of the cavities harden within two or three months and no further progress is noted.

Since the publication of these results, similar observations have been reported by others, and the dependence of dental decay upon inadequacies

of diet has become quite generally recognized. The subject has received considerable lay publicity, and has become quite familiar to a large group of the dental profession. If physicians are to play the part that is properly theirs in the prevention of dental decay, they must familiarize themselves with the nutritional requirements of the child. The very fact that caries is as prevalent in childhood as it is, serves as adequate proof that the proper nutrition of children has been neglected without the situation being recognized. These nutritional inadequacies of children are not dependent upon poverty, because they are prevalent among the well-to-do as well as among the poor. Various observers have noted that there is less tooth decay among children in orphanages than among the children in the public schools. It is probable that this is not dependent solely upon the character of the foods offered to each group, but rather to the fact that the orphanage group is disciplined to eat all the food served, while most children in their homes are allowed to choose their menu from the foods served. Yet it is true that in the private home, the family's food is chosen more in accordance with the food likes of its members than for their needs, while in most orphanages an attempt is made to provide adequate food in an economical manner.

In order to insure a sufficient supply of the necessary minerals and vitamins, it is best to have the diet consist chiefly of vegetables, fruits and dairy products. Starches and sweets have a valuable place and should be used, but must not be permitted to displace the more necessary fruits and vegetables. We have advocated the use of a teaspoonful of cod-liver oil daily. The following foods are suggested as a daily prescription for the average child of seven to sixteen years; for younger children, foods of the same nature would be employed, in appropriately smaller quantities:

- 1 quart of milk
- 1 or 2 eggs
- 1 serving of meat, fish, chicken or liver
- 2 vegetables ($\frac{1}{2}$ cup is considered a medium serving)
- 1 orange, or apple, or tomato
- 1 fruit in addition to the above
- 1 teaspoon of cod-liver oil
- 6 teaspoons of butter

Other foods, as bread, cereal, and potatoes, may be added to satisfy the appetite and maintain correct weight but under no circumstances should they replace any of the above.

It should be emphasized that arrest and prevention of decay has required no measures other

than the administration of an adequate diet, with no accessory medication, unless cod-liver oil is to be so considered. Within recent years, manufacturers of pharmaceuticals have placed on the market various concentrates of minerals, vitamins, endocrine products and what-not, which are purported to arrest tooth decay if taken in conjunction with an adequate diet. Similar results are obtainable with the adequate diet alone. Use of such adjuncts is not only unnecessary, but it diverts the attention from the fact that healthy teeth are to be the rule rather than the exception if the simple requirements of nutrition are met.

The rôle of bacteria in tooth decay seems to be secondary. With the intake of the necessary tooth-building substances, the tooth becomes more resistant to the action of bacteria. In areas where decay has been active, the deposition of secondary dentine serves to check further bacterial decomposition of the decalcified area, and recalcification of the intact matrix occurs. With a proper dietary, mouth hygiene seems to have little effect on the resistance of the teeth. Bunting has reported the results of dental observations made on four large groups of orphanage children; one group received a good diet, and also used a germicidal agent in the mouth under standard conditions; a second group received the diet but did not use the germicide; a third group used the germicide but did not receive any dietary supervision; a fourth group was used as a control. The first two groups showed arrest of caries in about equal degree; the third group's findings did not differ essentially from those of the control. Observations in our clinic have indicated that arrest of caries can occur in the presence of most unhygienic mouth conditions and that after arrest has been established, acidophilus bacilli can be recovered in large numbers from the mouth.

We have done nothing to determine whether caries can be attributed to any single causative factor. It is our belief that the integrity of the tooth is dependent upon the adequacy of the diet in all respects, and that probably the health of the tooth can be impaired through the inadequacy of any one of several essentials. Even though such were proved not to be the case, the indication still is to make the diet complete in all recognized essentials. We are learning more and more to detect the remote effects of diet inadequacies, and in any condition which may have such a background, the indication should be to correct the diet as a whole, rather than to attempt specific diet therapy. We should treat not the tooth, nor any other isolated part of the body, but direct therapy toward the health of the individual as a whole.

SUMMARY

Tooth decay can be prevented or arrested by the continuous intake of a diet which is complete in all the recognized nutritional requirements. Such a diet is furnished by a menu consisting primarily of milk, eggs, fruits, vegetables and cod-liver oil, together with meats and starchy foods in amounts sufficient to meet the energy requirements of the individual. Accessory medical therapy has not been found necessary except where indicated by other concurrent disease. The great prevalence of dental decay, with its resultant relationship to morbidity and mortality, and the evidence that it is dependent primarily upon the use of suboptimal diets, make it urgent that the physician cooperate with the dental profession in its treatment.

Discussion

Dr. Anton J. Carlson, Chicago: I should like to have Dr. Boyd briefly discuss the matter of the diet of the mother during gestation.

I think the facts you brought out are clear and have been fairly well proved, but what about the other problems, for instance, the diet of the mother during pregnancy?

Dr. Boyd, closing: In answer to Dr. Carlson, we do not feel that antenatal factors can be blamed to any great degree for the development of caries. It is true that hypoplasia of the dentine and enamel can result from a variety of conditions, some of which possibly are established during the antenatal period. Such hypoplasia will render the tooth more susceptible to bacterial invasion. However, if an individual with teeth of that type receives the proper diet, secondary sclerosis of the defective teeth will occur, and then the teeth will be resistant to decay.

It has been shown that the normal tooth responds to abrasion, or pressure, or decay, or dental fillings, or to other irritation, by a process of sclerosis of the adjacent dentine thus walling off the affected area. The tooth from the child whose nutrition has been incomplete, will be deficient in secondary sclerosis. This is also true in the presence of some diseases of metabolism. Decay progresses in such a tooth, and properly placed fillings do not necessarily check it.

The empirical observation is expressed frequently that certain families are predisposed to caries. Any such predisposition is explainable by the food habits of the family, rather than by an innate peculiarity of their teeth. Usually the food habits of the child are the food habits of the parents. A child does not have food dislikes until his elders teach him by example. When left to his own resources, the young child will eat almost anything that can be chewed and swallowed. I think that we can condition our children to like normal diets, so that they will eat them as a matter of course. The quickest way to do this is to adapt our own food habits accordingly.

CHILD HEALTH AND PROTECTION:
THE PHYSICIAN'S RESPONSIBILITY*

ANTON J. CARLSON, M.D., Chicago

Mr. Chairman and Fellow Students: I regret very much that I was unable to be here with you from the beginning of this meeting, because I always find that whether we meet in Iowa, California, or any other place, there is a great deal to be learned from the men on the firing line of practice by one who, like myself, spends most of his time in the research and teaching laboratories, trying to teach medical students.

I also regret, Dr. Moore, that I could not attend the Iowa White House Conference. I have seen your program, and of all the state conferences I have seen or attended, I was more impressed by the one in Iowa than by any of the other conferences, outside of the one in Washington.

I know, from what I have heard this morning, that what I am going to say has already been stated in part by some of the speakers.

I am not going to emphasize the obvious, namely, the physician's responsibility of increasing his fitness for diagnosing and treating the ailments of the individual child. To be sure, there are laggards and slackers among us, even in this respect. I have met, in general practice, graduates of our best medical schools who have ceased using the microscope, who have ceased making urinalyses, but those are rare exceptions in our profession. I know of no other special group in society that does quite as much, quite as continually and quite as seriously as the medical profession in keeping up with the advance in knowledge, in continually keeping themselves fit, both in head and hand, to meet the problems of disease in the individual. I do not mean that we should pat ourselves on the back, that we should cease holding our special, general or county meetings, continuing our postgraduate work, or publishing our journals. We should not do that. However, there is little to be said in the way of urging you on, or urging us on, by and large, in that regard. What I have to say, Mr. Chairman and friends, is in a somewhat disputed field where in the past I believe we have partly neglected our opportunity and our duty.

If there was anything that became apparent in the medical section of the White House Conference in Washington (and I believe that section did the most substantial work) it was this: We know a great deal more than we apply today in child health and protection. Dr. Moore told you a few minutes ago that that is partly due to igno-

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rance, ignorance on the part of the parents of the human machinery in health and disease, and of society, and partly to poverty. In the past the doctor as an individual or as a member of a group felt that he had no more responsibility than any other citizen in the community for the education of the community. Let us stop and consider that for a moment. Is there any other group in society who knows as much about the human machinery in health and disease as the medical profession? There is not. I think the main reason that we have not assumed the responsibility which special information and education places on the citizen in a democracy harks back to the past, and to the primary training in taking care of the individual sick. However, no matter what university or medical school you attended, your education was largely at the expense of society; in our state universities by taxes; in our private universities by endowment obtained from society. I do not mean to say that the good physician does not return to society a hundredfold what he has thus received, by his care of the individual sick. I think he does, but I think there is placed upon us the greater responsibility of guiding society in the matters of health, as long as there is so much ignorance and floundering.

Dr. Boyd told you what some of us have suspected and what is gradually being proved, that much of the health teaching in our schools does not square with modern knowledge. Who knows better than the physician what should be taught as proved facts in the way of individual and community health in the schools? I do not think society would misunderstand should you assert this fact. I think only the extremists, who will criticize you anyway, would say that you are just seeking increased business if you let it be known to your community, and to your school boards, that this, that or the other part of the health teaching in your schools is not up to standard. The everlasting drill with the toothbrush is less important than practicing, as Dr. Junger said, on a crust of hard bread. I have had capable dentists tell me, seriously, that the value of the toothbrush is that of rendering the teeth so slick, so slippery, that the bacteria cannot stay on them. That kind of ignorance would be laughable, were it not so general. It is depressing that it should come from individuals who have had the advantage of the modicum of science of biology that dentists received in their training. In our better dental schools today the situation is different.

What I am trying to say is not something that can be put in tables or illustrated on the board. You will heed it only if it appears reasonable to you. To be sure, many facts and measures considered as factors in health, are still in the bal-

ance, and none of us knows it all, but the good physician knows more about the real factors of health than does any other individual or group.

It looks to me, because of the complex and rapid industrial and economic developments of society today, that in order to produce fathers and mothers adequately informed in the ways of health, a real health teaching program should be established in our schools, continuous from the kindergarten up, as effective and as serious as the teaching of arithmetic, English or United States history. Does that seem reasonable to you? Is it worth trying? If you say yes to that, you cannot shirk your role as guides and leaders in this educational health program.

The kind of health education I have in mind in our grade schools and high schools is not a series of "thou shalt and thou shalt not," *in re* tobacco and alcohol, tooth brush, bath, and calisthenics, but rather something like this: This is the human body, these are the intricate and beautiful ways it works. These are the ways it can be strengthened; these are the ways it can be injured; and this is the evidence, not only from books but direct from nature, from the living human body, from animals, from models, from simple experiments on living organisms graded to the age of the child. This calls for new material equipment in our schools and new intellectual equipment in our teachers. Has it ever struck you as incongruous that in our high schools we have teachers especially trained in and frequently giving their entire time to teaching of Latin or German, or French, or botany (and this is right and necessary), but, so far as I know, we have not one teacher especially trained in and giving his or her entire time to human biology, human physiology, human health.

I believe most workers agree that it is only through the agency of fathers and mothers adequately educated in human biology in its broadest sense that continued application of the known to child health and protection will be most effectively carried out. Theories and philosophies of the nature of the world and man must be disciplined by facts. Modern curative medicine, modern preventive medicine, modern practice of individual and public health and modern practices of nutrition are based on facts that have been established about the human body in health and disease.

This is not an easy undertaking. It involves in part a restudy of our whole primary and secondary educational program, some retraining of teachers, and possibly a scrapping of some of the present curricula. It will not be accomplished tomorrow, even if we make a start today, but the longer we delay the longer we keep floundering, the more millions of uneducated fathers and moth-

ers are added to society to be faced again with the ignorance and the bewilderment as to the health and protection of their own children that we see in so many millions of parents today.

The other large problem before us is more controversial. It has been before us for some time. It is sometimes stated as public versus individual health, social versus private medicinal practice, but the antithesis implied in this formulation of the question is less absolute in fact. Our system of public education has not destroyed the private school.

I am thankful that Dr. Moore sent me a copy of the paper of Dr. Cary, president of the American Medical Association, read before the Iowa White House Conference. I think those of you who have followed this problem for years will recognize a new note in that paper. I may not be right, but it looks to me that the physician as an individual and as a member of a group, should take the same leadership in all the social efforts toward child health and protection that I have just indicated with reference to the health programs in our schools. Friends, it seems to me we should lead these social forces, not fight them; lead them in the path that they should go. To be sure, we are all more or less conservative. We are all conditioned by the past. The farmers in the Orient continue to scratch the ground with the same crooked stick used by their great-grandfathers. So far as I know in the history of medicine, we have reason to be proud of the past achievements under the strength and character of individuals, in the path of individual practice and responsibility, but the coat of the past does not necessarily fit the changing conditions of the present. I think we must seriously consider and assume leadership in all these social efforts toward health and protection of health. We have more knowledge than any other group. We cannot arrogate to ourselves all the wisdom, but with our information and our modicum of wisdom we can, if we choose, guide these developments so as to obviate many of the pitfalls before us.

I seem to sense that a greater amount of social thinking and social behavior on the part of every sane citizen is unavoidable for tomorrow. We cannot get away from it. The ancient question, "Am I my brother's keeper?" has been answered for us by the growth of society.

The day before yesterday I attended the showing of a film in Dr. Bundesen's office in Chicago on the problem that Dr. Boyd discussed. It was a dramatization, by school children, of the necessary food elements that go to build up good teeth in the child. It was excellently done. There were milk, vegetables, oranges, whole wheat bread, etc., and all were poured together into a pot, and the

healthy tooth came out, in Chicago, anno Domini 1932. But, where are the children from destitute homes going to get these ingredients? That may be a laughing matter in Iowa. You may not have the destitution we see in Chicago. There are thousands upon thousands of children in Chicago, who, no matter what the parents know, no matter what the children know, no matter what the teachers know, cannot get these food ingredients so as to avoid either dental caries or tuberculosis. We face that economic situation. We are building up health deficiencies in society, both through ignorance and poverty, that are going to cost us much in both cash and misery. Even in that line of thinking, however, I believe our profession stands second to none in information, in character, in courage, and in common sense; that is, in the indispensable elements of leadership.

I have been greatly discouraged by our federal inability to carry through some of the more obvious and significant "next steps" outlined by the White House Conference on Child Health and Protection a year ago; inability to carry through some of the practical measures so that a fourth White House Conference, ten years hence, will not merely repeat the other three, but be able to report progress. However, I have been cheered by the steps taken by the medical profession of this state to carry forward the Conference program, irrespective of support from Washington, or of support and general understanding from the citizens of Iowa. I believe that when we as individuals and as a group take these steps and follow through, the educational leaders and the civic organizations will rally. First they must discover in us the information, the wisdom, the foresight, the courage, and the minimum of selfishness that characterize a good citizen.

ANEMIAS IN CHILDREN*

JAMES E. DYSON, M.D., Des Moines

Do you ever make sidewalk diagnoses? I was enjoying that pastime the other morning on my way to the hospital. I saw two little girls about three years old tripping up the sidewalk hand in hand. That is, one of them was tripping. She was smiling. She was happy and healthy looking, and the other little girl seemed sickly. My particular attention was drawn to them by the sickly little girl attempting to trip her playmate just as I was passing, and then I noticed her more closely. She seemed pale, undernourished, tired, fretful, and the wool rag around her neck would indicate that she was subject to sore throat. I made the diagnosis of anemia. In other words, those are

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

the symptoms of anemia; pallor, malnutrition, fatigue, irritability, and liability to infection. These patients suffer from a lack of oxygen in their tissues. With a low red blood cell and hemoglobin content of the blood, the muscles, nerves, digestive organs and heart suffer for lack of oxygen.

centa, and there is an increased acidity of the blood, both of which conditions decrease the oxygen carrying capacity of the blood. There is an increase in number of red blood cells and the hemoglobin concentration. Frequently the hemoglobin of a normal newborn is 130 per cent and the red blood count is seven million. (See figure 2.) At

	AVERAGE BLOOD VALUES OF NORMAL INFANTS						
Age.	Birth	5 Days	2 Weeks	6 Mo.	1 Yr.	4 Yrs.	
HGB.	130%	120%	100%	80%	80%	90%	
R.B.C	6,200,000	5,800,000	5,300,000	4,900,000	5,000,000	5,000,000	
W.B.C.	15,000	11,000	11,000	10,000	10,000	8,000	
PMN	45%	40%	35%	40%	40%	50%	
EOS. and BAS.	3%	5%	4%	3%	2%	2%	
LYMPHO.	30%	40%	55%	51%	53%	40%	
MONO.	12%	12%	6%	6%	5%	8%	
IMMAT. W.B.C.	10%	3%	0	0	0	0	
NEUC. R.B.C.	++	+	0	0	0	0	

Fig. 1.

The blood of children differs from that of adults in several respects. First, there is a greater distribution of blood-forming organs. Blood is not only formed in the bone marrow, but in the liver, spleen, and lymph nodes in infants. Second, there is a greater variation in the number and types of cells in childhood, as is noted by the chart. (See figure 1.) Third, there is a greater response of the blood-forming organs to stimulation, and fourth, there is a lack of space in the bone marrow of infants for blood cell storage. Thus if there is an acute blood loss or other stimulation of blood-forming organs in infancy, there will be enlargement of the liver, spleen and lymph nodes. There will be a shift of the types of cells in the blood toward the immature, that is, there will be nucleated red blood cells and immature white blood cells.

In the fetal circulation oxygen is obtained with difficulty through several cell layers in the pla-

birth the acidity of the blood diminishes and the oxygen is obtained more easily through the alveolar membranes, thus doing away with the necessity of the red blood concentration. This excess of red blood cells is rapidly diminished by hemolysis. In fact this physiologic hemolysis is so great in some instances as to produce a jaundice. This we refer to as jaundice of the newborn.

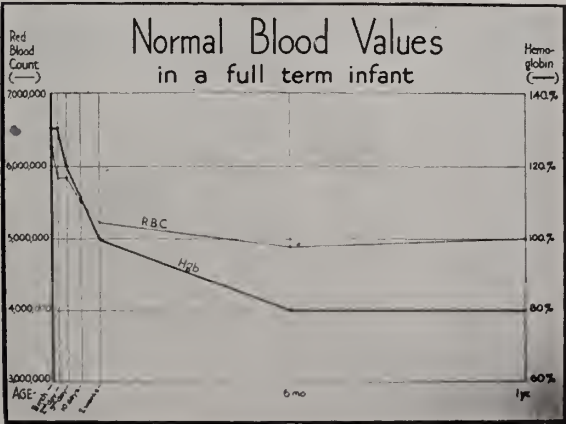


Fig. 2.

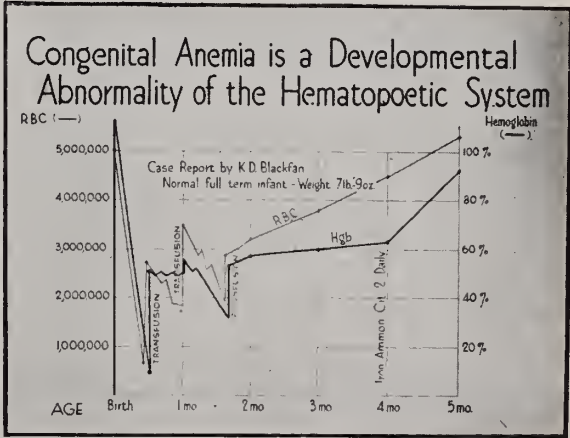


Fig. 3.

Red blood cells are continuously destroyed in the circulation and must be replaced by new formed cells. If for any reason the hematopoietic system is incapable of producing new red blood cells, an anemia of severe proportion rapidly develops. There have been some dozen cases reported of congenital anemia in which there seems to be a temporary aplasia. This is definitely shown by the fact that there are very few reticulocytes in the blood stream. Figure 3 shows a chart of a congenital anemia as reported by Dr.

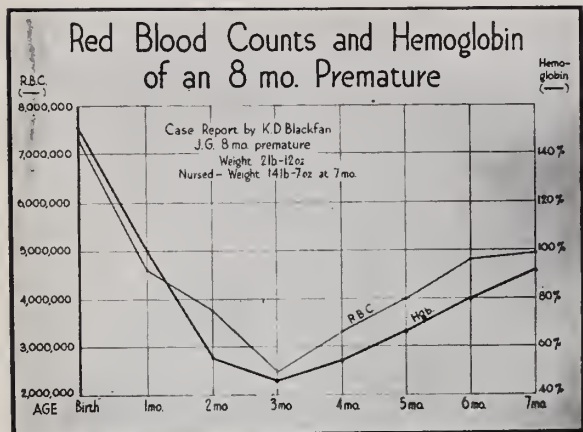


Fig. 4.

K. D. Blackfan, in which the hemoglobin went well below 20 per cent and the red blood count below one million at two weeks of age. Repeated transfusions brought this infant up to a fairly normal blood count by the second month.

Iron is necessary for the formation of red blood cells and hemoglobin and the infant draws from a storehouse in the liver for his iron and copper. Prematures and twins do not have a normal amount of iron and copper stored in their liver. The process of storing iron and copper must take place in the latter months of pregnancy. The premature and twin begin to show an anemia at about the second and third months, due to two causes: first, because of the immaturity and weakness of the hematopoietic system, and second, because of the iron and copper deficiency in the liver. Figure 4 shows a chart of an eight months premature.

The normal full term infant has enough iron and copper in his liver to last about six months. As an infant is practically entirely milk fed up to this time, and as milk is very low in iron, he de-

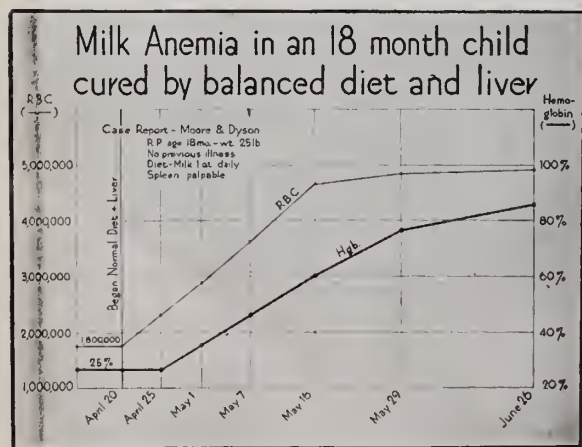


Fig. 5.

pends upon his storehouse for blood formation. If the infant is kept on a milk diet after six months or on any diet deficient in iron he will develop an anemia which we know as nutritional or milk anemia. This milk anemia will appear earlier than six months in prematures and twins, and it will also appear if there is an acute infection. Figure 5 shows a chart of a child with milk anemia, who was brought to Dr. Fred Moore and myself at eighteen months. She had been on a milk diet and had never taken any foods containing iron. Her hemoglobin was 25 per cent, her red blood count was 1,800,000 per c. mm. and the spleen was enlarged. One might think of splenic anemia in such a case, but there frequently is splenic enlargement in severe secondary anemia in infants. This child became entirely normal on a high iron diet in two months.

Clinical Classification of Anemias of Childhood

1. Premature Anemia - Twins
2. Alimentary Anemia - Milk Anemia (Iron poor diet)
Over fat or edematous (Sugar diet)
3. Hemorrhage
4. Infections -

ACUTE	{ Upper Respiratory and pneumonia Pyelitis, nephritis, dysentery, typhoid
CHRONIC	{ Pyogenic infections, Congenital syphilis, Tuberculosis.
5. Toxins - Chemical, as lead, Neoplasms, Parasites, as Malaria.
6. Miscellaneous - Pernicious anemia, Congenital anemia, Erythroblastic anemia, Hemolytic jaundice, Sickle cell anemia, Goats milk anemia, Von Jaksch's anemia.

Fig. 6.

There is still another form of nutritional anemia that is due to overfeeding of sugar and starch. If the baby becomes excessively fat and waterlogged, there is a proportionate increase of blood volume. The demands upon the blood-forming organs are so great that they cannot keep pace with the rapid increase of blood volume and an anemia develops, due to the dilution of the red blood cells and hemoglobin.

Hemorrhage, either acute or chronic, produces a simple secondary anemia (see figure 6). Except in the very severe acute hemorrhage where transfusion is necessary as an emergency measure, no treatment is necessary. Since the blood-forming tissues are not diseased by toxins or infections, they respond rapidly to the necessary increased production. In the chronic, long continued hemorrhage there may, however, be an exhaustion of the hematopoietic system, in which case it is necessary to give some attention to treatment.

Infections cause secondary anemia in childhood

more frequently than any other factor. The acute upper respiratory infections, tonsillitis, otitis media, and mastoid; the pneumonia infections; the colon bacillus infections, particularly pyelitis; typhoid bacillus and other bowel and kidney infections are particularly prone to cause secondary anemia. Chronic pyogenic infections, such as osteomyelitis and empyema, produce anemia. A little patient frequently will lose 20 to 25 per cent hemoglobin and one and one-half to two million of his red blood cells in the course of ten days' to two weeks' infection (figure 9).

There are two other chronic infections which are particularly prone to cause anemia: congenital syphilis and tuberculosis. There are certain toxins which cause anemia, such as lead poisoning. There is a severe anemia accompanying neoplasms, intestinal parasites, malaria, rickets and scurvy. The cause of anemia in these conditions is not known but it is probably due to toxins inhibiting the blood formation.

Pernicious anemia is very rare in childhood. There have been a few cases reported in the literature, so diagnosed by the blood findings. However, these cases did not show the typical symptoms of pernicious anemia in the adult, such as glossitis, achylia-gastrica and cord changes. On the other hand, there are several blood diseases of infancy in which the blood changes simulate pernicious anemia. The "erythroblastic" anemia which occurs in the infants of Greek, Italian and Syrian parentage contains nucleated red blood cells, and the sickle-cell anemia which occurs in infants of Negro parentage is characterized by megalocytes in the blood and severe anemia.

Goat's milk anemia which is due to a prolonged diet of goat's milk has blood changes which closely simulate pernicious anemia.

Von Jaksch's anemia, which is a pseudo-leukemic anemia and occurs in infants from six to eighteen months of age, is characterized by severe anemia, leukocytosis, immature cells, enlargement of the spleen and liver. It usually occurs in the child with rickets and is probably but a severe form of secondary anemia following infection. I believe that von Jaksch's anemia is not a disease entity in itself, but a secondary anemia due to the combination of rickets and infection.

OCCURRENCE OF ANEMIA IN PRIVATE PRACTICE									
Years	OF AUTHOR								Total
	1	2	3	4	5	6	7	8-12	
Premature	3								3
Nutrition	10	6	6	2					24
Rickets	3	5							8
Hemorrhage		1		2				1	4
Infection	4	6	5	7	8	6	8	16	60
Miscellaneous									11

Fig. 7.

Infantile splenic anemia, purpura, von Jaksch's anemia, myxosarcoma, cretin, myxedema, ulcerative colitis, erysipelas, tuberculosis, malaria, syphilis.

I tabulated in figure 7 one hundred cases of anemia occurring in my own practice and found that 3 per cent were due to prematurity; 24 per cent were nutritional anemia; 8 per cent accompanied rickets. If the 8 per cent due to rickets were added to the other nutrition anemia cases, it would raise the percentage to 32. Four per cent were due to hemorrhage; one of these cases was an ulcerative colitis with chronic loss of blood; another was post-tonsillectomy hemorrhage. Sixty per cent were secondary to infection. Eleven per cent could not be put in the above classification and included infantile splenic anemia, purpura, myxosarcoma, cretinism, and myxedema.

ANEMIAS CLASSIFIED AS TO TIME OF OCCURRENCE	
Congenital anemia	2 to 3 weeks
Anemia of prematurity.....	2 to 3 months
Nutritional anemia (milk).....	6 to 18 months
Anemia accompanying rickets.....	9 to 18 months
Anemia from infections.....	1 to 4 years

Fig. 8.

Another aid in diagnosing anemia in infancy is the time of its occurrence. In figure 8 I have classified the anemias in my own case records as to the age of occurrence. Congenital anemia appeared at the end of two or three weeks; the anemia of prematurity at two or three months; milk anemia appeared after the sixth month and was usually most severe at eighteen months. The anemia accompanying rickets was also in the six to eighteen months age. The anemia secondary to infections occurred naturally with infections. If anemia is due to congenital syphilis, it will appear soon after birth. As the preschool child is most susceptible to the infections of the nose and throat and upper respiratory passages, many of the anemias of that age follow these infections.

I hesitate to attempt a classification of anemias of childhood according to their cause; however, looking at this problem from another angle might help to clarify it. Here let me refer to figure 9.

- THE ANEMIAS OF CHILDHOOD CLASSIFIED ACCORDING TO CAUSE
1. Development defects.

Congenital anemia—deficiency of the blood-forming tissues.

2. Prematurity and twins.

Iron and copper deficiency in the liver.

3. Hemorrhage.

Acute and chronic blood loss.

4. Nutritional deficiency.

Milk diet—low in iron.

5. Hydremia.
Overfat—high sugar diet.
Edematous—thyroid deficiency, nephrosis.
6. Infections.
Acute:
Upper respiratory and pneumonia, pyelitis, nephritis, dysentery.
Chronic:
Tuberculosis, congenital syphilis, chronic pyogenic infections.

Fig. 9.

Still another angle from which we may consider the anemias of childhood might be a classification of mechanism of production, as outlined in figure 10.

ANEMIAS OF CHILDHOOD CLASSIFIED ACCORDING TO MECHANISM OF PRODUCTION

1. Developmental—a. Deficiency of hematopoietic system.
Example: Congenital anemia.
- b. Deficiency of iron and copper in the liver.
Examples: Prematures and twins.
2. Aplasia—Acquired bone marrow deficiency or exhaustion.
Examples: Malnutrition, low iron and vitamins, chronic pyogenic infections.
3. Hemorrhage—Acute or chronic blood loss.
Example: Hemorrhage of the newborn.
4. Hemolysis—Red blood cell destruction.
Example: Bacterial toxins.
5. Dilution—Hydremia.
Examples: Overfat (sugar fed).
Edematous—(nephrosis, hypothyroid).

Fig. 10.

The treatment of anemia in infants is the same, whether preventive or curative (see figure 11). The most important phase is the dietary treatment. All babies should be fed foods of high

Treatment of Anemia in Children

1. Preventive and Curative

A. DIETARY
Early feeding of iron containing foods
Avoiding overweight from high sugar foods
Balanced vitamin contained diet

B. MEDICINAL
Giving iron and copper to prematures.
Liver extract and iron following infections.

C. HYGIENIC
Fresh air and sunshine

2. Emergency
A. TRANSFUSIONS — Direct and repeated

Fig. 11.

iron content in early infancy. Prune juice and egg yolk may be added to the diet as early as three months. Spinach broth and beef juice may be given at five or six months. Whole wheat cereal and oat meal may likewise be started at the fifth month. The diet should be well balanced in all elements of food and should contain particularly fat and protein. Infants fed on a high starch and sugar diet become overfat, waterlogged, and anemic. Particular attention should be paid to the vitamin content of the infant's diet. Orange juice and cod-liver oil should be started as early as one month. Their use prevents scurvy and rickets, both of which conditions are accompanied by anemia. Fresh air and sunshine in the summer and violet ray in the winter likewise stimulate blood formation, raise the resistance of the infant and help in the prevention of rickets.

The administration of iron and copper should

Foods of High Iron Content are Necessary to Prevent or Cure NUTRITIONAL ANEMIA IN INFANTS

Iron Content of Foods in MGM %			
Liver	8.8	Egg Yolk	8.6
Molasses	7.3	Whole Wheat	.5
Oatmeal	3.8	Spinach	3.6
Lean Beef	3.	Prunes	3.
Corn Meal	2.5	Raisins	2.
Orange Juice	0.02	Milk	0.02

Fig. 12.

be started early, particularly in prematures and twins. If an anemia has developed of nutritional cause, the feeding of high iron diet, such as liver and egg yolks, and the giving of copper and iron are curative. Liver and iron should be given in all anemias secondary to infection.

Another point in the treatment of anemia which I have omitted from my slide is that of removing the cause. This is particularly true in infections. If the anemia is due to congenital syphilis, use antisyphilitic treatment; if it is due to malaria, give quinin; if due to hypothyroidism, give thyroid; if it is due to chronic pyogenic infection, drain the infection. It is impossible to cure an anemia due to infection as long as the infection is active. It is true, however, that a child with anemia is more susceptible to infection and when the anemia is improved, the resistance to infection increases. Transfusions are immediate but only temporary relief for an anemic infant. We often use small repeated direct blood transfusions to restore the

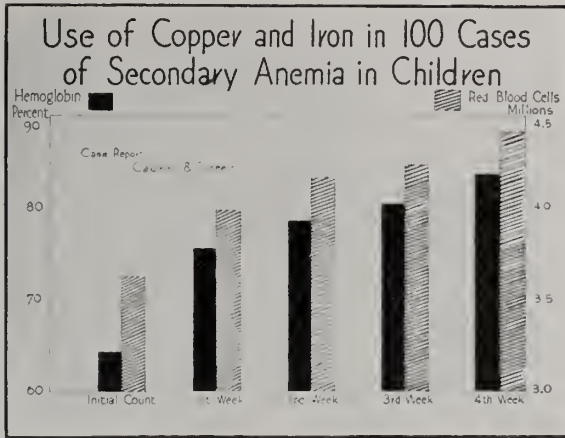


Fig. 13.

patient following a severe prolonged infection. Transfusions are also used in the emergency of an acute hemorrhage.

The iron content of foods which are common to a child's diet shows us the excellence of liver and egg yolk (see figure 12). The minimum required amount of iron has been estimated at 15 mg. ($\frac{1}{4}$ grain) per day. If a child depended upon liver alone for his iron, it would require six ounces; if he should choose egg yolks, it would require seven per day, and also if he should choose a strictly milk diet, he would require eighty barrels of milk a day to supply him with iron.

Figure 13 shows one hundred cases of secondary anemia, treated by Caldwell and Dennett, who received $\frac{1}{2}$ grain (32 mg.) of iron and $\frac{1}{250}$ grain (.25 mg.) of copper three times a day. Their chart shows the rapid improvement of hemoglobin and red blood cells. There is considerable difference of opinion concerning the dosage of iron and copper. Lewis gives saccharated ferrous carbonate, 15 to 60 grains daily, and .5 per cent copper sulphate solution, 1 to 2 teaspoonfuls

three times a day. (Each teaspoonful contains $\frac{1}{3}$ grain copper sulphate.) Hampton gives commercial iron and ammonium citrate, 15 grains a day. It is thought that there is enough copper in the ordinary preparation of iron and ammonium citrate to sufficiently augment its action. Copper, however, is not poisonous as it has been given to animals, 5 grains a day, over a long period.

The infant's life is in the balance. His resistance to infection depends upon the iron in his blood.

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Discussion

Bennett A. Melgaard, M.D., Sioux City: Mr. Chairman and gentlemen of the Society: I am pinching at the eleventh hour for the man who was scheduled to lead the discussion of Dr. Dyson's paper.

I am happy to commend to you what Dr. Dyson has said for he always brings a lucid picture of any subject he presents.

In this brief discussion I just want to mention two or three of what seem to me to be the most important points. Since the anemias of infancy and childhood that concern us most and are seen the most frequently are secondary, it immediately presupposes that we should bend our efforts to prevent them.

First, Dr. Dyson mentioned anemia in prematures. This may be lessened by better prenatal care so there will be fewer premature babies.

Then the next group, the nutritional anemias, may be lessened by beginning iron- and copper-containing foods earlier than has been the general practice. Today even cereals may be obtained which are very excellent because they contain the valuable minerals and the more common vitamin elements.

Usually in the anemias of infancy the cell count is not changed, and the treatment resolves itself into building up the hemoglobin. Infants are born with a reserve supply of iron which gradually becomes depleted. Therefore, early vegetable feeding is the most important measure we can use. Prolonged

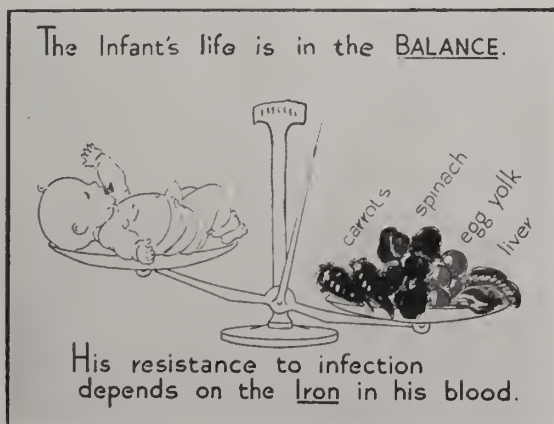


Fig. 14.

breast feeding, particularly in rural districts, is still a common practice, babies often being nursed fifteen months or longer without other feeding. Of course, the great majority of babies thus treated have anemias.

The third group comprises the anemias due to infection. These are seen in older children particularly, as a result of chronic nose and throat infections, purulent otitis, tonsillitis, sinusitis, and pyogenic infection of the genito-urinary tract. Many of the laity have the conviction that tonsils should not be removed before a given age, say, four years. As a result, many diseased tonsils are left in, being a primary focus of infection themselves and contributing to a persistent pyuria that is resistant to treatment.

There is no patient with pyuria who does not have a constant, persistent anemia. So long as the child has an active infection, it is idle to give him iron and copper. He will continue to be anemic until the infectious foci are removed.

The secondary anemias of childhood, therefore, are, in reality, not diseases *per se*, but symptoms that should lead us to seek out the cause that we may eradicate it.

Dr. Dyson spoke about the treatment with iron and copper, copper being the newer remedy. We must not forget that it does not take the place of iron; its only purpose is to fortify the use of the iron in our treatment.

James E. Dyson, M.D., closing: I wish to thank Dr. Melgaard for emphasizing prolonged breast feeding as a cause of milk anemia. Anemia may result from breast feeding as well as from cow's milk. Infection being the most frequent cause of secondary anemia, the removal of tonsils and all sources of infection may be necessary as a preliminary step in the successful treatment of secondary anemia.

There is a great difference in the dosage of iron which is given to these children with anemias. The minimum required dose may be but $\frac{1}{4}$ grain per day, but as much as 30 to 60 grains of saccharated carbonate of iron have been given daily. The commercial preparation of iron and ammonium citrate probably carries enough copper so that no additional copper is necessary.

JOHNS HOPKINS BONE AND RADIOLOGICAL CONFERENCE

All Iowa physicians are invited to attend the Johns Hopkins Bone and Radiological Conference to be held in Baltimore, September 19-24, inclusive, under the auspices of the Surgical Pathological Laboratory of Johns Hopkins Hospital.

Monday, September 19, the program has been arranged especially for oral surgeons and those interested in jaw, teeth and the oral cavity. Tuesday, September 20, conferences will be held on the special subjects of jaw, giant cell tumor and Ewing's sar-

coma, while Wednesday, Thursday and Friday will be turned over to the main bone demonstrations.

Any physician desiring further information or wishing his name put on the mailing list for meeting announcements should write to Miss Maude E. Walker, Surgical Pathological Laboratory.

THE SIXTY-FIRST ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

The sixty-first annual meeting of the American Public Health Association will be held in Washington, D. C., October 24-27, with headquarters at the Willard Hotel. Since the American Public Health Association is the corporate body of all public health workers of the country, other affiliated organizations drawing from this same personnel will hold annual sessions at about the same time, and at the same place.

Of these organizations attention is directed to the meetings of the American Social Hygiene Association, American Association of School Physicians, International Society of Medical Health Officers, Conference of State Laboratory Directors, Conference of State Sanitary Engineers, and the Association of Women in Public Health.

MEDICAL PUBLISHERS CONSOLIDATE

Announcement is made by The Williams and Wilkins Company of Baltimore of its purchase, on June 16, of the inventory assets of William Wood and Company, medical publishers of New York City. Good will and use of the Wood name and imprint is included in the purchase.

The Wood Company is well known as a publisher of medical textbooks and importer of English medical books. The Williams and Wilkins Company is a young company which has specialized in research publications of several sorts, including medical works. The list of titles of the combined concerns approximates 600.

MEMORIAL FUND HONORS DR. JOHN B. DEAVER

The Aid Association of the Philadelphia County Medical Society is establishing a special perpetual fund in honor of Dr. John B. Deaver, only the income of which will be used to afford aid to needy physicians and their families. The committee in charge of the memorial is anxious to bring the matter to the attention of all physicians and surgeons who may desire to thus honor Dr. Deaver, and all friends of Dr. Deaver are invited to participate. Any amount given will help in creating a fund which will be a fitting perpetual memorial, since all monies received will be placed in the John B. Deaver Perpetual Memorial Fund. Checks or inquiries should be directed to the Aid Association of the Philadelphia County Medical Society and sent to Dr. Francis Heed Adler, Secretary, 313 South 17th Street, Philadelphia, Pennsylvania.

STATE HEALTH COMMISSIONER'S PAGE



D. C. Sturtevant, M.D.



TYPHOID FEVER

The increased speed and facility of travel and the consequent intermingling of people make the problem of carriers of *B. typhosus* one of greatest importance.

From July 1 to August 20, 38 cases of typhoid fever have been reported in Iowa. Of these 38 cases, 21 occurred in separate counties; two counties reported two cases each with no epidemiologic connection between the cases; one county reported four cases from three communities and one county reported ten cases in one family (the father had returned ill with typhoid fever from another state).

The number of cases for the period January 1 to August 20, 1932, is greater by 78 than that for the same period in 1931. The occurrence of so many sporadic cases and the absence of any local outbreak of the disease indicate that carriers are the sources of infection of many of these cases.

Since approximately 4 per cent of all persons recovering from typhoid fever remain carriers for the rest of their lives the problem of preventing the spread of typhoid fever by these persons resolves itself into four principle phases: first, to discover the carriers; second, to inform carriers of their condition and the danger of infecting other people; third, to immunize all associates of carriers; fourth, to remedy the carrier condition. One important phase in the control of carriers is the reporting of known carriers to this department. Upon receipt of such report a mimeographed sheet of instructions will be sent to the carrier.

The requirement that convalescents from typhoid fever must not be discharged until two examinations of both feces and urine show the absence of the typhoid organism was made to assist in the control of carriers. Any person whose feces continue to show *B. typhosus* as long as twelve weeks after convalescence is arbitrarily considered to be a carrier.

Thirty years ago, we were taught empirically that "it was really negligence on the part of the attending physician to allow more than the initial case or cases to occur in the same family" and that "it was the duty of the attending physician to inform the family of the modes of infection so that they might avoid further cases of the disease." We now know that such teaching was founded upon fact.

The illustration of the mode of infection as depicted by Chapin, viz.: "Dirt, Diarrhea, and Dinner" and by Sedgwick, "Food, Fingers and Flies" is as true today as in the time of these great epidemiologists.

The occurrence of a case of typhoid fever means that there has been a short circuit between the bowel or bladder discharges of another case or of a carrier and the mouth of the patient. All patients with typhoid fever should be isolated. Visiting should be prohibited and all persons except those who have duties there excluded from the sick room. The attendant should be skilled in the methods of preventing the spread of the infection and should know how to protect herself and others. All discharges from the body of the patient must be disinfected with chlorid of lime or other disinfectant immediately.

Every person who may be in direct or indirect contact with the patient should be vaccinated at once and advised in detail of the danger of infection to himself and others and how they may avoid such infection.

To bring about relief from the carrier state is difficult. "Once a carrier—always a carrier." Extirpation of the gall-bladder has proved beneficial. Urotropin in large and continued doses has proved successful in a few cases. Vaccines with increasing doses at intervals of ten days, starting with 25 to 1,500 million have produced good results in some cases.

PREVALENCE OF DISEASE

Disease	July, 1932	June, 1932	July, 1931	Most Cases Reported From
Diphtheria	46	31	10	Pottawattamie, Polk
Scarlet Fever	34	158	66	Hancock, Pottawattamie
Typhoid Fever	16	5	7	Lee, Mahaska
Smallpox	21	65	110	Dubuque, Pottawattamie
Measles	17	18	38	Hancock, Dubuque
Whooping Cough	46	43	114	Page, Woodbury
Chickenpox	24	95	46	Adams
Poliomyelitis	4	0	2	Adams, Allamakee, Johnson, Polk
Tuberculosis	56	44	35	Linn
Syphilis	186	218	199	(For State)
Gonorrhea	265	301	411	(For State)

The JOURNAL of the
Iowa State Medical Society

ISSUED MONTHLY

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VOL. XXII SEPTEMBER, 1932 No. 9

EXCERPT FROM THE MINUTES OF THE MEET-
ING OF THE BOARD OF TRUSTEES

AUGUST 25, 1932

Resolved, That since one of the important duties of a managing director of the state society is his assistance to the Legislative Committee, and since this phase of his work requires a certain amount of previous training, the close proximity of the coming legislative session precludes the possibility of training a new man sufficiently before the opening of the session, it will be necessary for the Legislative Committee to employ trained assistance and legal advice and the work during the forty-fifth session of the legislature can therefore be carried on without the aid of a managing director.

Be it further resolved, That since there is before the House of Delegates, for action during the next annual session, a proposed change in the constitution which would eliminate the Board of Trustees and place in the hands of the Council the duties heretofore delegated to the Trustees, the present Board of Trustees deems it wise to leave the appointment of a managing director to the body to which he would be responsible.

Be it further resolved, That the ordinary activities of the Society can be carried on with the present office force, and thereby effect a material economic saving to the Society.

Be it further resolved, That the election of a managing director be postponed until after the next annual session of the Society.

CHILD HEALTH ACTIVITIES IN IOWA

This number of the JOURNAL is devoted to the medical interests of children. It is an appropriate recognition of the efforts of the pediatricians of the Iowa State Medical Society to develop sound clinical programs in pediatrics for the state and county societies and to offer sound medical guidance to lay organizations that are active in those fields pertaining to child health.

The most important meeting ever held in Iowa in relation to child health was the Iowa White House Conference in Des Moines last April. This conference was anticipated when at the 1931 meeting of the Iowa State Medical Society the pediatricians requested the appointment of a special Committee on Child Health and Protection. The House of Delegates authorized the appointment of such a committee and our society is to be congratulated that it has functioned so well. When Governor Turner appointed his committee for the Iowa White House Conference on Child Health and Protection, the pediatricians were already organized and ready to give the medical direction needed.

The program of the medical section of the Iowa Conference was prepared and presented by the leading pediatricians and obstetricians of the state. The section was successful in bringing to Des Moines the then President-elect of the American Medical Association, Dr. E. H. Cary, of Dallas, Texas. Dr. Cary delivered a most thoughtful address, which is published in this issue, and which every member of the society is urged to read. He emphasized the necessity of participation and leadership by medical men in all lay organizations that are active in the field of health. In the field of child health our pediatricians have been doing that very thing; were doing that very thing in bringing Dr. Cary to Iowa.

Having ably discharged its responsibilities in connection with the Iowa White House Conference, the medical section was given the opportunity to develop the half-day program on pediatrics for the annual session of the Iowa State Medical Society, which was held in Sioux City last May. To those who did not hear that program it may be said that they missed an excellent half-day of practical pediatrics. To those who heard the program, comment is superfluous. It is appropriate, however, to express again our appreciation of the splendid presentations made by the guest speakers for that morning, Dr. Stewart of the University of Minnesota and Dr. Carlson of the University of Chicago.

The laity is more interested and more active in the field of child health than in any other. The

Iowa State Medical Society should encourage just such coöperation between lay and professional groups as has been cultivated by the pediatricians in their activities.

APPENDICITIS—RECENT MORTALITY STUDIES

While appendicitis cannot be considered a controllable disease in the same sense as those of a communicable origin, it is nevertheless appreciated that certain factors such as early diagnosis and prompt operation in acute cases have a definite bearing upon mortality studies from appendicitis, and in this sense the disease becomes one of public health interest.

A recent report* published by Frederick L. Hoffman, LL.D., Consulting Statistician, concerning the appendicitis record for 1931, indicates that in a survey of some sixty cities aggregating a 28,000,000 population in 1931, the deaths from appendicitis showed a decline over that reported for 1930. Prior to this period, that is, between 1920 and 1930, the mortality in these same sixty American cities had remained practically stationary. In a study of 183 American cities for the last two years the death rate had declined from 18.7 per 100,000 in 1930 to 17.9 in 1931. These figures may be considered as significant for the urban population since this study covered a population approximating 43,000,000.

In accepting a mortality figure in appendicitis of approximately 18 per 100,000 for certain city groups of the United States, it is interesting to compare our standing with various foreign cities of comparable size as indicated by this study. Of those cities having adequate facilities for recording mortality studies it would appear that some ten or a dozen cities in as many countries enjoy mortalities much lower than those shown for American cities from this particular disease. It is shown, for example, that in the cities of England and Wales the mortality from appendicitis for the period 1920 to 1930 averaged about 7.4 per 100,000, or less than half that common to this country. The average urban appendicitis death rate for Canada excluding Quebec, for the period 1921 to 1929 was 13.5 per 100,000; whereas, for Australia, between 1918 and 1928, the figure was 9.4. The author in this article does not attempt to point the finger of criticism towards American medicine for the high mortality rates indicated, nor does he attempt to explain the differences in mortality in this and other countries upon a basis of skill. Too many factors are involved to permit such an analogy. He does state, however, "The

table below gives food for reflection, for it emphasizes unmistakably our unenviable position regarding the loss of life from a largely preventable affection."

In closing his article he quotes from the recent surgical studies made of Philadelphia's hospitals, believing this analysis applicable to other well regulated hospitals in other cities. According to the Philadelphia investigation for 1930, in 28 hospitals 338 surgeons performed 3095 operations for appendicitis. Of the 149 deaths in 1930, 83.22 per cent were due to spreading peritonitis, 7.38 per cent to local peritonitis, and 9.4 per cent to other causes. They further indicated that of those patients admitted within twenty-four hours after the onset of the illness the possibility of succumbing to the disease was 2.55 per cent; for those admitted within forty-eight hours the mortality was 4.11 per cent; for those admitted within seventy-two hours, it was 7.49 per cent; and for those admitted after seventy-two hours, 10.42 per cent.

It has been said that statistics can be made to prove anything, but it would seem that this statistical survey of appendicitis mortality would indicate (1) that improvement could be enjoyed in this country in the handling of appendicitis from the surgical standpoint; (2) that the responsibility for the early recognition of this disease must rest upon the shoulders of the general practitioner; and (3) that the mortality in operated cases bears a direct relationship to the promptness with which the diagnosis is made and operation instituted.

A QUARTER OF A CENTURY OF DRUG AND FOOD SUPERVISION

The last annual report of the Food and Drug Administration summarized the activities of this important branch of the United States Department of Agriculture for the past twenty-five years. The Federal Food and Drug Act, drawn up by the late Harvey W. Wiley, came into being on a wave of popularity, and was approved on June 30, 1906. It had as its initial purpose: first, to insure the purity of foods and drugs and, second, to protect the consumer from economic frauds.

During the past twenty-five years, many amendments have been enacted which, so far, have tended to strengthen the law, and the Food and Drug Administration look back with justifiable pride upon their twenty-five years of operation. During the law's existence, more than eighteen thousand regulatory actions have been instituted. This does not imply that the administration of the law has been perfect or that all operators have complied with the regulations. Constant vigilance is neces-

* The Spectator, July 21, 1932.

sary to protect the public from the carelessness or deliberate adulteration or misbranding of goods.

During the past year, the administration investigated sixteen alleged food poisoning cases and found only four of these that might have come from contaminated foods. In the two years just past, no cases of botulism have been reported. During the fiscal year of 1931, the administration found many shipments of imported figs to be of extremely low quality. They officially examined more than fourteen million pounds of imported figs and detained about thirty per cent for failure to meet the standards of the Food and Drug Act. Their activities have extended to the analysis of poultry, rabbits, fresh fish and fish products and other types of food which are often found to be infested with objectionable foreign matter. Their activities during the past year have caused the seizure of five hundred and seventy grossly and fraudulently labelled proprietary medicines. Of this number, one hundred and twenty-three preparations were found to be falsely labelled, so as to state or imply that they were effective remedies against influenza. Next in order of their frequency, mislabelled remedies were seized for false claims in the treatment of rheumatism, malaria, diabetes and tuberculosis. A continuation of the work done in 1930, in cooperation with prohibition authorities and state health officers, has gone far in removing the cause of jake paralysis occasioned by the consumption of cheap and impure Jamaica ginger. Of over six thousand samples of ether for anesthetic purposes, about five per cent were found to be below the U. S. P. quality. This figure, when compared with that of 1926, in which thirty-four per cent of the samples were found to be below standard, indicates the great improvement in the manufacture, shipping and storing of ether.

LET'S EDUCATE THAT GULLIBLE PUBLIC

The purchase of hair tonic from a bald-headed barber would seem to be a vindication of Barnum's theory of life and give color to the assumption that "the public is dumb." Such an analysis appears superficial, however, and a more strict appraisal of the situation would seem to indicate that the public is far from dumb except in matters too technical for its comprehension.

In viewing the cultist's show window, the average physician would look with disdain upon the illuminated chart indicating the various vertebrae of the human spine, which, by a clocking device, may be manipulated to vividly indicate the displacement of the vertebrae with the consequent upheaval of various organs of the body. Such a

viewpoint is entertained by the physician only because of a more complete knowledge of the human anatomy and its physiology and not because of any lesser degree of gullibility. Would the physician be so astute in the evaluation of a delicate machine such as a radio or even a gasoline motor? If a garage mechanic would explain to you that the "step-up coil" in your car governed the timing of your automobile engine and by means of blue prints and drawings demonstrated this phenomenon, would you be willing to classify yourself as a "nitwit" for accepting the fallacy? Consider, if you will, how much more intricate the human mechanism is than the gasoline motor.

Is it surprising then that one uninitiated into the mysteries of anatomy and physiology should be deceived? But perhaps there is a lesson for us in the cultist's illuminated mechanical monstrosity.

Is it too far fetched to believe that today many a physician is destroying his own practice by failing to take his patients into his confidence and discuss with them in language which the patients can understand the peculiarities of their conditions and the rationality of the therapy applied. Fad-dists have capitalized on this psychology and in many instances have appeared more convincing than medical practitioners.

Further, there exists among all classes a widespread superstition regarding disease processes and particularly regarding treatment. Even among our most intelligent patients, we find that it is a common belief that boils are the outlet for poisons collected in the blood and that one boil is actually worth from \$5.00 to \$20.00 to the sufferer. Is it strange that a person with this concept of this skin infection should desire medicine directed toward the purification of the blood rather than local measures in the treatment of his boils? Is it strange that without adequate explanation by the physician he should fail to connect in a logical way the transference of infection from one boil to the site of a second? Is it particularly silly for a patient to carry a buck-eye in his pocket to cure rheumatism, when his physician and critic raps on wood to prevent bad luck? Does it take such a wide stretch of imagination to conceive that a displaced cervical vertebrae could cause deafness in the former heir to the Spanish throne unless one realized that the auditory nerve did not emerge from the cervical spine? If I should have misconceptions about the astronomical bodies and their movements and courses, would that be ascribed to my inherent dumbness or perhaps could it with accuracy as well as charity be ascribed to my lack of education in that particular line? If we assume that the public is dumb about medical facts, then

does not the faultiness of the situation rest upon the medical profession, and should our course be one of criticism or education?

RADIOLOGY—A MEDICAL SPECIALTY

At frequent and stated intervals every business man takes inventory of his stock and from a careful analysis of his past business record determines his future business course. Physicians are notoriously poor business men, and with many of them an inventory is unheard of. So long as they have funds for current expenses, the maintenance of a suitable office, provisions for their family, and funds for an occasional outing, the physician may feel himself in a very secure position. But even with such a one, can not much be gained from a careful inventory, of both his finances and his position in his profession and his community? How often does one stop to consider his usefulness to mankind? How prone is one to accept his own appraisal of himself or his specialty as being that of the general public?

In a recent issue of *Radiology**, the official organ of the Radiological Society of North America, there appears an editorial entitled, "Is Roentgenology, As A Specialty, Destined to Survive?" The author, a prominent southern physician, takes inventory of his profession, and attempts to determine whether there exists a real need for the specialty of roentgenology. He appreciates the fact that, due to the perfection of x-ray equipment, it has become possible for a reasonably intelligent person to learn in a few months to make technically excellent roentgenograms. He further appreciates that the public today is demanding that x-ray examinations be included in general physical examinations. He further realizes that there is not a field in the practice of medicine which does not require the application of this specialty. He discusses the cost, both to the physician and to the specialist, of the equipment and supplies for carrying on this work, and discusses with a background of thorough understanding the position of the roentgenologist in the average American hospital.

His conclusions are most interesting and timely: "The roentgenologist who wishes personally to survive, who desires to protect his specialty from what he considers unfair attack, apparently has no recourse save the education of the profession or the public in the need for his specialized effort. He is reluctant to appeal to the public, impersonally and with largely altruistic motives, after the manner of, for instance, the cancer education campaign, though it could be done, as many think, justifiably, ethically, and successfully. Can he succeed in educating his professional colleagues?"

INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

The annual international assembly of the Interstate Postgraduate Medical Association of North America will be held in Indianapolis, Indiana, October 24 to 28, inclusive. A brief survey of the program discloses the fact that all five mornings of the session will be devoted to diagnostic clinics, conducted by distinguished clinicians from all parts of the country, while the afternoon programs will consist of addresses, illustrated lectures and symposia.

The following physicians are tentatively scheduled to present clinics: Edward W. Archibald, M.D., McGill University Faculty of Medicine, Montreal, Canada; H. W. Scott, M.D., Western Reserve University School of Medicine, Cleveland; E. Starr Judd, M.D., University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester; O. H. Perry Pepper, M.D., University of Pennsylvania School of Medicine, Philadelphia; John M. T. Finney, M.D., Johns Hopkins University School of Medicine, Baltimore; Donald C. Balfour, M.D., Mayo Clinic, Rochester; Elsworth S. Smith, M.D., Washington University School of Medicine, St. Louis; George P. Muller, M.D., University of Pennsylvania School of Medicine, Philadelphia; David P. Barr, M.D., Washington University School of Medicine, St. Louis; John R. Fraser, M.D., McGill University Faculty of Medicine, Montreal; Frank H. Lahey, M.D., Boston; Lewellys F. Barker, M.D., Johns Hopkins University School of Medicine, Baltimore; Eugene H. Pool, M.D., Columbia University College of Physicians and Surgeons, New York; Warfield T. Longcope, M.D., Johns Hopkins University School of Medicine, Baltimore; Cyrus C. Sturgis, M.D., University of Michigan Medical School, Ann Arbor; Irvin Abell, M.D., University of Louisville School of Medicine, Louisville; Allan G. Brown, M.D., Toronto Faculty of Medicine, Toronto, Canada; Arthur D. Bevan, M.D., Rush Medical College, Chicago; William McKim Marriott, M.D., Washington University School of Medicine, St. Louis; John F. Erdmann, M.D., Columbia University School of Medicine, New York; Harold B. Cushing, M.D., McGill University Faculty of Medicine, Montreal; Dean D. Lewis, M.D., Johns Hopkins University School of Medicine, Baltimore; John J. Moorhead, M.D., New York Postgraduate Medical School, New York; William E. Lower, M.D., Cleveland; Charles A. Elliott, M.D., Northwestern University School of Medicine, Chicago; Hugh H. Young, M.D., Johns Hopkins University School of Medicine, Baltimore; William Darrach, M.D., Columbia University College of Physicians and Surgeons, New York; Campbell P. Howard, M.D., McGill University Faculty of Medicine, Montreal; Hugh Cabot, M.D., Mayo Clinic, Rochester; Emanuel Libman, M.D., Columbia University College of Physicians and Surgeons, New York; George W. Crile, M.D., Cleveland; Henry B. Christian, M.D., Harvard Medical School, Boston; Elliott P. Joslin, M.D., Harvard Medical School, Boston; Charles H. Frazier, M.D., University of Pennsylvania School of Medicine, Philadelphia; Harlow Brooks, M.D., New York University and Bellevue

* *Radiology*, Vol. XVIII, No. 5, May, 1932, p. 1039.

Hospital Medical College, New York; William D. Haggard, M.D., Vanderbilt School of Medicine, Nashville, Tennessee.

Special addresses will also be made by the above clinicians, as well as by the following prominent doctors: Howard M. Clute, M.D., Boston; Perry G. Goldsmith, M.D., University of Toronto Faculty of Medicine, Toronto; Fielding O. Lewis, M.D., Jefferson Medical College, Philadelphia; James M. Martin, M.D., Baylor University School of Medicine, Dallas, Texas; Max Ballin, M.D., Detroit; Frank C. Knowles, M.D., Jefferson Medical College, Philadelphia; Walter R. Parker, M.D., University of Michigan Medical School, Ann Arbor; Joseph F. McCarthy, M.D., Columbia University, New York; Edwin W. Ryerson, M.D., Northwestern University Medical School, Chicago.

Professors Anton J. Carlson and Arno B. Luckhardt of the department of physiology, University of Chicago, will present a motion picture, "Cardiac, Vasomotor and Respiratory Phenomena with an Analysis of the Signs and Symptoms of Experimentally Raised Intracranial Pressure," and Waltman Walters, M.D., of the University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, is to read a paper on Ureterosigmoidal Transplantation, with presentation of cases by lantern slides.

The assembly will close with a banquet at the Claypool Hotel, Friday evening, October 28.

SECTION CHAIRMEN ANNOUNCED

At the July meeting of the program committee, held in Des Moines, President W. W. Bowen announced the section chairmen for the coming annual session as follows: Dr. Guy T. McCauliff, formerly of Hampton and more recently of Webster City, chairman of the surgical section; Dr. Albert A. Schultz of Fort Dodge, chairman of the medical section; and Dr. Harold J. McCoy of Des Moines, chairman of the eye, ear, nose and throat section.

The pediatric program will be arranged by the committee on child health and protection of which Dr. Fred Moore of Des Moines is chairman.

WAPELLO COUNTY PROGRAMS

Since the Wapello County Medical Society has been unusually successful in presenting programs prepared by members of the group, the method of arranging and conducting programs is outlined below for the benefit of other societies interested in the development and instruction of their membership.

For thirty years the Wapello County Medical Society has operated as a postgraduate school. The plan was initiated by Dr. J. F. Herrick, who served as secretary for many years.

The society meets twice a month for nine months of the year.

The program is published and in the hands of each member in advance. The essayist or clinician under-

stands that he is expected to be present with a thoroughly prepared paper or clinic, and that excuses are not satisfactory. The essayist is the instructor for that evening. It is understood that discussions must be constructive and never personal, unless to compliment.

The whole structure is founded upon the belief that the county society should have as its primary object the development of its membership: first, to investigate and think, and second, to express. As a result, members vie with each other, young and old, in presenting programs of worth. Outside speakers are seldom called.

THE 1932 GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE

Tumors, benign and malignant, will be the theme of the 1932 Graduate Fortnight of the New York Academy of Medicine held from October 17 to 28, inclusive. The medical profession of the country is invited to participate in the intensive two week study of this important medical and surgical subject. A full program of clinical demonstrations, lectures and conferences has been arranged to cover all phases of tumors, their diagnoses and treatment.

Concurrent with the Fortnight, and for an added week thereafter, there will be housed in the Academy building an exhibition of anatomic specimens numbering approximately 3,000 units. A number of the sections in the exhibition will be subjected to lecture demonstrations at regular intervals.

Ten evening meetings have been arranged during which tumor growths in various parts of the human anatomy will be discussed. Among the speakers are included Doctors W. Gordon M. Byers, Edwin Beer, Charles A. Elsberg, James Ewing, Donald C. Balfour, Daniel F. Jones, Dean Lewis and Francis Carter Wood, and others. Thirty afternoon clinical meetings and demonstrations have been arranged in eighteen of New York City's leading hospitals, including Bellevue, Lenox Hill, Presbyterian, St. Luke's, Fifth Avenue, Post-Graduate, Neurological Institute, and others.

The profession of the country is invited to attend and to participate in the Graduate Fortnight. There is no charge for attendance at any of the clinics or meetings, but registration is required for participation in the hospital demonstration clinics.

A complete program and registration blank for the clinics and demonstrations may be secured by addressing the New York Academy of Medicine, 2 East 103rd Street, New York City.

SPEAKERS BUREAU ACTIVITIES

FUNDAMENTALS IN MEDICINE

One of the most unusual and outstanding projects which the Speakers Bureau has undertaken is the postgraduate course to begin in Des Moines on Friday, October 7. This course is to be sponsored by the Section on Ophthalmology and Otolaryngology of the Polk County Medical Society but it will be open to all those who care to enroll for the work. The course is to be on the "Fundamentals of Medicine," the tentative outline for which is as follows:

October 7—Recent Conceptions of Immunity—Ludvig Hektoen, M.D., Chicago.

October 14—Cellular Immunity—Paul Cannon, M.D., University of Chicago.

October 21—Inflammation—Harold E. Robertson, M.D., Mayo Foundation.

October 28—Focal Infections—Henry L. Ulrich, M.D., Minneapolis.

November 4—Rheumatic Disease—Lecturer to be announced later.

November 11—Blood Diseases in Relation to Eye, Nose and Throat—C. W. Baldrige, M.D., University of Iowa.

November 18—Sympathetic Nervous System—C. F. McClintic, M.D., Detroit.

December 2—Arteriolar Changes in Hypertension, etc.—E. T. Bell, M.D., University of Minnesota; Henry P. Wagener, M.D., Mayo Clinic.

December 9—Chemiotherapy—Torald H. Sollman, M.D., Cleveland.

December 16—Malignant Tumors of the Head—Gordon New, M.D., Mayo Clinic.

This course is so outstanding that doctors within a radius of fifty or seventy-five miles are planning to come to Des Moines for the meetings. It will be necessary to limit the number of those taking the work to one hundred. Those who are interested are therefore urged to enroll at once. The fees for the course will be twenty dollars.

This course will follow the regular postgraduate schedule—ten meetings, once a week for a period of ten weeks. The meetings begin each Friday at 5:30 p. m. and last until 10:00.

Those who wish to take advantage of this unusual opportunity may send in their enrollment to the Speakers Bureau, Iowa State Medical Society, 1122 Bankers Trust Building, Des Moines.

POSTGRADUATE WORK

The postgraduate courses offered each year by the Speakers Bureau and the College of Medicine of the State University of Iowa will be given this fall in the eastern part of the state at the following centers: Washington, Davenport, Monticello and West Union. The courses this year are to begin on Monday, October 3, at 5:00 p. m. at Washington; Tuesday, October 4, at Davenport; Wednesday, October 5, at Monticello, and Thursday, October 6, at West Union, and will continue the same day each week for a period of ten weeks.

The subjects to be covered are: (1) surgery for the general practitioner and (2) pediatrics and obstetrics. The surgical course is under the direction of Howard L. Beye, M.D., head of the Department of Surgery at the College of Medicine, and the combined course on pediatrics and obstetrics will be given by Philip C. Jeans, M.D., and E. D. Plass, M.D., who are also the heads of their respective departments at the College of Medicine.

Special arrangements have been made so that these two courses—forty hours of postgraduate work—may be taken for the nominal fee of fifteen dollars.

RADIO TALKS

Station WSUI, Thursdays, 8:00 p. m.

Station WOI, Fridays, 4:00 p. m.

September 2-8—Infantile Paralysis—Roland W. Stahr, M.D.

September 9-15—Goitre—C. B. Luginbuhl, M.D.

September 16-22—Mental Hygiene—Julia F. Hill, M.D.

September 23-29—Arthritis—J. C. Hill, M.D.

September 30-October 6—Anemia—Robert B. Gibson, M.D.

October 7-13—Hypertension—D. J. Glomset, M.D.

MEDICAL SOCIETY OFFICERS

With the beginning of fall activities of the various organizations, the Speakers Bureau is receiving many requests for speakers, particularly to lay audiences. Any reports, therefore, of doctors who are qualified and willing to give talks to lay audiences will be very helpful to the Bureau in its work and the officers of the various medical groups are urged to send in the names of any such men that they know of in their own locality.

SOCIETY PROCEEDINGS

Chest Clinics Held

Several heart, lung and tuberculosis clinics have been held in Iowa recently. These clinics are sponsored by the local county medical societies and expenses are paid by the Iowa Tuberculosis Association out of funds raised during the Christmas Seal Sale. A list of these clinics includes:

Buena Vista county, July 15, at Storm Lake. John H. Peck, M.D., Des Moines, and W. E. Sanders, M.D., Des Moines.

Calhoun county, July 21, at Rockwell City. John H. Peck, M.D., Des Moines, and C. B. Luginbuhl, M.D., Des Moines.

Chickasaw county, August 12, at New Hampton. John H. Peck, M.D., Des Moines, and D. J. Glomset, M.D., Des Moines.

Louisa county, August 19, at Morning Sun. John H. Peck, M.D., Des Moines, and C. B. Luginbuhl, M.D., Des Moines.

Bremer County

The annual picnic of the Bremer County Medical Society was held at the Frederika Park in Waverly, Tuesday, July 26, with nearly all the physicians in the county present. The group gathered at the park at four o'clock where games and sports of various kinds were played, after which a picnic supper was served.

Clinton County

The Clinton County Medical Society held its August meeting recently at the Clinton Country Club. Forty-one were present including several visiting doctors. After dinner served in the dining room of the club, we adjourned to the lounge where Dr. Howard R. Hartman, of the Mayo Clinic, Rochester, gave a talk on Mexico and showed some motion picture films which he had taken on several visits to that country, depicting historical buildings, temples and scenes in Mexico, and what is seldom seen, a bull fight. They were very interesting and instructive and we were given quite a different picture about Mexico and its problems than we usually derive from current newspaper reading and commercial films.

Ralph F. Luse, M.D., Secretary.

AUXILIARY NEWS

Dallas-Guthrie Auxiliary

The Dallas-Guthrie Medical Society and Auxiliary held their annual picnic at Woodward, Friday, July 22. The quarterly meeting was held in the school auditorium of the state hospital, opening at two o'clock. Officers were elected for the ensuing year as follows: Mrs. E. L. Bower of Guthrie Center, president; Mrs. T. W. Blake of Woodward, president elect; Mrs. S. T. Foster of Adel, vice president; Mrs. P. W.

Beckman of Perry, secretary; and Mrs. C. I. Thomas of Guthrie Center, treasurer. A picnic supper was enjoyed in the circle garden at the rear of the Voldeng home.

Mrs. Walter Jackson Freeman of Philadelphia, president of the Woman's Auxiliary to the American Medical Association, is making a tour of the United States, conferring with auxiliary officers and directors. She is expected in Des Moines, Tuesday, September 20, at which time she will be entertained at luncheon by the Board of Directors of the Woman's Auxiliary to the Iowa State Medical Society. More definite news of the plans for her entertainment will be published when the local committee completes arrangements.

INTERESTING NEWS

In Brief

Mr. William H. Donner of Villanova, Pennsylvania, has placed at the disposal of the International Cancer Research Foundation cash and securities amounting to \$2,000,000 as a memorial to his son, Joseph W. Donner. The object of the foundation is "to increase interest in and the amount and quality of cancer research; develop new minds and theories; broaden the viewpoint of some investigators already in the field, and increase cooperation among scientists throughout the world, correlating results of their investigations and preventing duplication of work."

Decrying the indiscriminate use of headache powders, Dr. F. J. Cullen of the Federal Food and Drug Administration indicates that in their researches they have found acetanilid, acetphenitidin, amidopyrine, aspirin, and other coal-tar derivatives, commonly used in these powders. Acetanilid is usually declared since the Federal Food and Drug Act specifically requires a declaration of this drug on the package.

At a meeting of the Medical Economics Committee of the Iowa State Medical Society, held in the state society offices on August 17, a fee schedule was drawn up for use in compensation cases.

The deputy Attorney-General of Wisconsin has recently handed in a ruling indicating that under Wisconsin laws a chiropractor who uses electrotherapy in his practice violates the medical practice act of the state.

Significant of the prevalence of Hodgkin's disease or pseudoleukemia, Dr. Bernard F. Schreiner has reported that among 9,540 cancer cases at state institutions in New York, 107 were due to Hodgkin's disease.

One of the first investigations of the newly created Council on Dental Therapeutics of the American Dental Association has been concerning the bacterioidal and mucin removing qualities of various mouth washes. Their report would indicate that the preparations examined have little or no beneficial effects along these lines.

A recent statement credited to C. Edith Kirby, statistician to the National Society for the Prevention of Blindness, indicates that each year between 700 and 1,000 children suffer accidental eye injury and about 70 of these children are actually blinded by preventable accidents.

The Board of Trustees of the Iowa State Medical Society met in the state society offices August 25. A report of action taken at that meeting will be found in the editorial section.

The United Air Lines have recently removed the restriction against transporting infants on transport planes upon a statement from physicians that no harmful effect results to the infant from flying even at considerable elevation.

Dr. J. C. Lewis of Washington, D. C., has recently reported four cases of duodenal ulcer resulting in perforations due, in his opinion, to the immoderate use of alcoholic beverages.

PERSONAL MENTION

Dr. Howard I. Down, who for the past few years has been connected with the Mayo Clinic at Rochester, announces the opening of offices at 515 Davidson Building, Sioux City.

Drs. George B. Crow and George B. Dixon, of Burlington, were re-elected president and vice president respectively, of the Burlington Protestant Hospital School for Nurses.

Dr. C. A. Nicoll, who has been practicing his profession at Linden for the past four years, has moved to Panora, and opened an office there.

Dr. George E. Hearst, of Cedar Falls, district inspector for the Aeronautical Division of the United States Department of Commerce, is making an investigation of aviation in Alaska, with reference to the effect of cold and altitude on the fliers, combining the business with a pleasure trip from which he expects to return about September 10.

Dr. C. A. Soe, formerly of Greenfield, has recently purchased the office equipment and fixtures of the late Dr. M. M. Loomis, and has moved with his family to Denison, where he will continue the practice of medicine.

Dr. Donald L. Borgen, of Nevada, has opened an office in Gowrie. He is a recent graduate of the State University of Iowa College of Medicine and served his internship in a Detroit, Michigan, hospital.

Dr. W. W. Pearson, of Des Moines, was elected president of the Iowa Academy of Ophthalmology and Otolaryngology, at the all day meeting held in Waterloo, Thursday, August 18.

Dr. Raymond Cohen has returned to Des Moines from Chicago, where he has just completed three years' special work in pediatrics at the Illinois Research Hospital. He is planning to locate in Des Moines, specializing in the treatment of children's diseases. Dr. Cohen was graduated from the University of Chicago and Rush Medical College.

Dr. J. J. Potter, staff member of the otolaryngology department of the State University of Iowa City, sailed recently for a year's tour of European medical centers, where he will study under terms of an appointment by the Rockefeller foundation. He plans to visit Austria, England, Belgium, Holland, Germany, Switzerland, Spain and France.

Dr. A. J. Lenzmeier, who was recently graduated from the State University of Iowa College of Medicine, is locating in Davenport to engage in the practice of medicine and surgery. He is to be associated with Dr. James Dunn at 1002 Davenport Bank Building. Dr. Lenzmeier served his internship at the Gallinger Municipal Hospital in Washington, D. C.

MARRIAGES

Miss Marcella Powell, of Des Moines, and Dr. Douglas N. Gibson, of Des Moines, were united in marriage at the Plymouth Congregational Church, Saturday, July 23. Dr. and Mrs. Gibson left on a motor trip to Canada, immediately following the wedding breakfast. The bride has been an instructor in the Des Moines Public Schools since 1929. Dr. Gibson, who is an orthopedic surgeon in Des Moines, has been associated with Dr. Eugene Wolcott for some time.

DEATH NOTICES

Bickley, John Cecil, of Waterloo, aged forty-eight, was drowned August 9, while swimming in the Cedar River. He was graduated in 1907 from the New York Homeopathic College of Medicine, and at the time of his death was a member of the Black Hawk County Medical Society.

Ericsson, Charles Melvin, of Gowrie, aged sixty, died July 30, after several years of failing health. He was graduated in 1905 from the State University of Iowa College of Medicine, and had long been a member of the Webster County Medical Society.

Jones, Edgar Hazelwood, of Eldora, aged seventy-four, died August 7, after a severe illness of only a few days. He had, however, been in poor health for several years. He was graduated in 1893 from the University Medical College of Kansas City and at the time of his death was a member of the Hardin County Medical Society.

Kenefick, Michael J., of Algona, aged seventy-one, died August 6, as the result of a cerebral hemorrhage. He was graduated in 1892 from Rush Medical College and at the time of his death was a member of the Kossuth County Medical Society. A more complete obituary will be found in the History of Medicine Section of this issue.

Magee, Charles Henry, of Burlington, aged seventy-two, died August 7, as a result of complications accompanying pernicious anemia. We was graduated in 1889 from Missouri Medical College, St. Louis, and at the time of his death was a member of the Des Moines County Medical Society. See the History of Medicine Section of this issue for a more complete obituary.

Smith, Harry T., of Humeston, aged sixty-two, died August 23, in an Osceola hospital, following an operation and illness of six weeks. He was graduated in 1897 from Keokuk Medical College and at the time of his death was a member of the Wayne County Medical Society.

HEALTH CONDITIONS IN THE UNITED STATES

In a report recently made to Congress, Surgeon General H. S. Cumming states that reports of the prevalence of communicable diseases received by the Public Health Service from state health officers and preliminary reports of deaths from several sources indicate that the health record for the United States for the calendar year 1930 was exceptionally good. The record for the first half of the year 1931 was also generally good although an epidemic of mild influenza during the early months of 1931 increased the death rates for a time and gave the year an inauspicious beginning.

During the calendar year 1930 the incidence of influenza in the United States was unusually low. The death rate from influenza for the year 1930 was 18.7 per 100,000 population as compared with 54.6 per 100,000 population in 1929 and 42.1 in 1928. The fact that there was no general outbreak of influenza during 1930 probably helped greatly in keeping the general death rate for the year low, as there is usually an increase in the number of deaths attributed to certain other diseases when influenza is prevalent.

Infantile paralysis was more prevalent during the calendar year 1930 than it was in 1928 or 1929. In the spring of 1930 the reports showed increased incidence of infantile paralysis on the Pacific coast, and later considerable numbers of cases of the disease were reported in other parts of the country,

especially in Louisiana, Oklahoma, and some of the north central states. In the country as a whole, infantile paralysis reached its peak for the year about the first of October. An outbreak began in New York City soon after the close of the fiscal year. This outbreak later reached considerable proportions, the number of cases being considerably in excess of those reported for the preceding year.

The tuberculosis death rate for the calendar year 1930 was the lowest ever recorded by the Public Health Service. It was 68.5 deaths per 100,000 population as compared with 73.1 in 1929 and 76.4 in 1928. In 1900 the Bureau of the Census recorded a death rate from tuberculosis of 201.9 per 100,000 population. The difference between the tuberculosis death rates of 1900 and 1930 represents a saving of more than 160,000 lives in 1930 which would have been lost from tuberculosis in the United States if the 1900 rate had prevailed that year.

The prevalence of typhoid fever has been decreasing in the United States since comparable yearly statistics of cases and deaths have been available. During the calendar year 1930 a slight reaction was shown by the reports. The increase was reported during the last six months of 1930 and in some states at least it may have been influenced by the drought conditions which resulted in pollution of water supplies or necessitated the taking of drinking water from new or unknown sources. The typhoid fever rates as computed from reports to the Public Health Service were as follows: 1930, 22 cases per 100,000 population; 1929, 19 cases; and in 1928, 22.7 cases.

The case and death rates for diphtheria in 1930 were the lowest which the Public Health Service has ever recorded—54.2 cases and 4.9 deaths per 100,000 population. Ten years ago, 1920, the diphtheria case rate was 155 per 100,000 and the death rate was 15.3 per 100,000.

More than 1,450 cases of undulant fever were reported to the Public Health Service for the calendar year 1930. The disease has been recognized in every state of the Union.

RARE AMINO ACIDS NOW AVAILABLE

New information on feeding problems is expected to result from the announcement that the research division of S. M. A. Corporation is able to supply certain rare amino acids and other protein derivatives to research physicians and others interested in research in nutrition.

Research on many nutritional problems has been held back by the scarcity and high prices of some of these amino acids which are more costly than platinum. Moreover, these amino acids are used up and destroyed in experiments, whereas platinum may be salvaged and used again and again.

Consequently the announcement of a new source of supply should give a stimulus to food research. The research division of S. M. A. Corporation in making this announcement expressed the thought that the prices of these rarer chemicals may ultimately be brought within the range of any research budget.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. MCCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

Michael J. Kenefick, M. D. 1861-1932

AN APPRECIATION

Sorrow came to the hearts of the entire medical profession of Iowa when word went out from Algona, August 6, 1932, that Doctor M. J. Kenefick had gone from natural sleep into the sleep of eternal rest.

Michael J. Kenefick was born at Ripon, Wisconsin, May, 1861, and died August 6, 1932, at Algona, Iowa, at the age of seventy-one years. His father, Patrick Kenefick, was born in Limerick county, Ireland, and his mother, Sarah Coyle, was born in Quebec, Canada. They located in Hardin county, Iowa, near Ackley in 1867, the family arriving from the east in a covered wagon.

Doctor Kenefick was a graduate of Iowa State Teachers' College class of 1883. He was a teacher for several years, after which he attended the University of Iowa two years in Liberal Arts and one year in Medicine, graduating from Rush Medical College in 1892. He began his practice at Marshalltown where he remained for only a short time and then located in Algona in 1892. He took postgraduate work at the Postgraduate hospital, the Chicago Polyclinic, Bellevue hospital in New York and at the University of Minnesota. It is a matter of common knowledge among the profession of the state that Doctor Kenefick was as loyal to the State University of Iowa, including the medical department, as any of its graduates. He attended many of the State University clinics and was always so enthusiastic in his remarks when called upon for addresses at these meetings that most of the profession thought he was a graduate of its medical department.

On November 14, 1900, he was united in marriage to Edith M. Lusk. Mrs. Kenefick, a graduate nurse, was a great help to her husband in his practice, especially during the time he was establishing his hospital.

He made a splendid success in Algona, bringing to that community professional ability, honesty and loyalty. In 1907 he was instrumental in establishing the first hospital in his part of the state. Through

his studiousness and untiring energy he built up a splendid surgical practice and was known as one of the real pioneer surgeons of that time. He not only gave to the profession the best he had, but also gave himself to his community. He was known for his kindness, sympathy and generosity. He represented the ideal of the country practitioner of his time. In the early days he drove trackless prairies and crossed bridgeless streams, enduring all the hardships confronting pioneer doctors of Iowa. He continued the hospital until about two years ago when failing health forced him to give up his strenuous professional career. However, he was still active in a lesser degree and assisted in an operation the day before his death.

In October of last year the Austin Flint-Cedar Valley Medical Society met in Algona. The meeting was called especially to honor Doctor Kenefick. At this time a fine gold-headed cane was presented to him as a token of esteem, respect and love by the members of this medical society. Those of us who were privileged to be present, remember the splendid sentiments he expressed relative to the true physician and on this as well as other occasions we have heard him give advice to the younger members of the profession, urging loyalty, honesty, and diligence in pursuit of their practice. Realizing that not many more years were left to him, he expressed the hope that during his career he might have in a small way inspired some of the younger members of the profession with a determination to give their best to those coming to them in physical, mental and even moral distress.

Among the younger men who were associated directly with him in the practice of medicine was Doctor Frank J. Rohner of Iowa City. I have heard Doctor Rohner say in speaking of his association with Doctor Kenefick, that in his early experience with him, he had learned much of the Art of Medicine and had been deeply impressed with Doctor Kenefick's

constant principle of considering the patient's interests first. Doctor E. A. Hartman of Algona was associated with him until four or five years ago. Then Doctor R. H. Crawford of Des Moines was with Doctor Kenefick for two years. He, too, was prepared for larger fields of endeavor, going from Algona to Indianapolis. During the last year a nephew, Doctor John Kenefick, was associated with his uncle. I have heard Doctor Kenefick tell of the great pleasure and satisfaction he received from having these young men associated with him, suggesting to me at one time that these young fellows kept him from falling too far behind in the later developments of medicine and surgery. He often said, "They have kept me from becoming an old fogey." The doctor seemed to especially enjoy his association with his nephew, Doctor John.

Doctor Kenefick was at all times unusually interested in the progress and problems of his own community. He served on the public school board for twenty years. He was always an active factor in his county medical society and one of its past presidents. He was past president of the Austin Flint-Cedar Valley and the Twin Lakes Medical Societies. He was also a member of other medical societies, among them the Chicago and Northwestern Association of Railway Surgeons and the American Association of Railway Surgeons.

As an evidence of the high regard in which he was held by the profession of the state, he was elected president of the Iowa State Medical Society and

served during the year 1928. In spite of the handicap of physical infirmity during that year he made an efficient president and devoted much of his time to the interests of the Iowa State Medical Society. He continued to maintain his influence and efforts for the best of the society after his term of office expired.

It is my privilege to have known Doctor Kenefick since 1889, when I began my medical studies at Iowa

City while he was taking what would now be called his pre-medical course. At that time he had the reputation of being the keenest debater in the Literary Society of which he was a member. "Mike" Kenefick, as he was affectionately called by his friends, was known for his vein of humor, his brilliant wit and his serious devotion to his college work. He was then as always throughout life, cheerful and optimistic, always agreeable and a delightful companion and in every sense a constant friend. Of him, it can be said, "The world is a little better because he lived." For many the sun was a little brighter, for others, because of him, burdens a little lighter. The following poem, written by Miss Carrie



MICHAEL J. KENEFICK, M.D.

Burrington of Waverly, Iowa, expresses what his friendship has meant and still means to me:

Friends

Fairer than clouds in sunset sky
That gleam like gold, then fade and die,
Are thoughts of friends we fain would keep
Forever in our hearts so deep.

Better than gems of priceless worth
Are friends who comfort us on earth,
For friendship is a gift divine—
One of the best, O friend of mine.

Then let us keep e'en to the end
Heart linked to heart as faithful friend,
And then, perhaps, with failing breath
We'll call thee, too, our friend, O death!

William A. Rohlf, M.D.

Dr. Kenefick was one of those rare men who hold opinions of their own and yet live harmoniously with their neighbors. Perhaps that is the rarest gift of life, or if we speak of it as an accomplishment, the one most to be cultivated where intense individualism must be made enduring in a world of steadily massing populations. The doctor not only had his own views in politics and religion—in everything he was tenacious of them—but his intimate friendships were among people of every group.

Part of this was a matter of temperament and part of it a matter of idealism. The doctor's views were never influenced by self interest. He stood for what seemed best to him without regard to himself. In fact he frequently took his stand where what we speak of as native shrewdness would have suggested that he at least soft pedal a little. If the doctor believed something ought to be done, that ended the debate in so far as he was concerned. In the course of the years he won the confidence of the community he lived in and of his professional brethren over the state.

Tennyson, recording the death of Enoch Arden, says:

"And when they buried him the little port had seldom seen a costlier funeral."

Perhaps never in Algona have more people gathered from more parts of the state representing more groups than gathered to pay their last respects to Dr. Kenefick. It was notable merely as a gathering. The associations of many years had part to do with it, but there was more than that. Everybody in every walk of life who had known the doctor had some feeling of regard for him, and that feeling was manifested in the only formal way we have as our friends bid us hail and farewell.

It would be easy to speak of the doctor more in person, for the associations of long years suggest that sort of intimate appraisal. But in the end it is the impersonal rather than the personal that measures the meaning of life. It is the impression made on the community, the standards emphasized, the example set. It is what is handed on to become part of the building material of succeeding generations.

The medical profession will rank a little higher for having had Dr. Kenefick as a member because he never lowered his professional standards. Community life will be on a little higher level because in all his personal relations he maintained his social standards.

The best that can be said of any man is that the

world is better for his having lived in it. Dr. Kenefick was a good physician, and a good citizen. He left the world a little better than he found it.

Harvey Ingham.

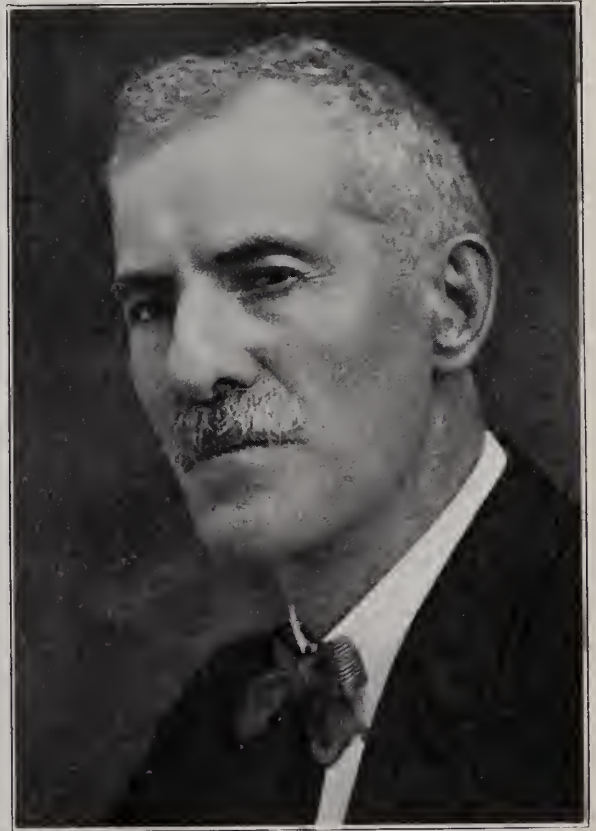
CHARLES HENRY MAGEE, M.D.

1860-1932

An Appreciation

Dr. Charles H. Magee died at his home in Burlington, Iowa, August 7, 1932, at the age of 72 years. Death was due to an acute intestinal infection superimposed on a severe pernicious anemia.

Iowa medicine has lost one of the most colorful figures in its history. He was born on a farm near Hartford, Putnam county, Missouri, one of a large family. As he approached manhood he decided to



CHARLES HENRY MAGEE, M.D.

study medicine. Lacking the needed funds for this, he taught school for a few years. At that time and in that section of the country, school teachers were nearly all of the masculine gender and these men were the intellectual leaders in their respective communities. Those were the days of the country school debating teams and the County Institute, and, surrounded by men of aggressive and positive personalities, young Magee early became a leader in impromptu discussion and debate; a characteristic which

most Iowa physicians know lasted throughout his lifetime.

He received his first medical training in the old Missouri Medical College, now Washington University, St. Louis, and practiced for two years in Martinstown, Missouri, a few miles from his birthplace. He was graduated from the University of Pennsylvania and from the New York Postgraduate Medical School. He then went to Unionville, Missouri, where he remained for several years except for an interruption of about eighteen months which he spent in hospital work in London and Dublin. Shortly after completing his hospital work abroad he located in Burlington, Iowa, September 1, 1901, where he remained until his death. He was married in 1902 to Miss Bird Devore of Oquawka, Illinois, and she and a son, Robert, survive.

Dr. Magee was a tireless student. He early became interested in anatomy and surgery. Soon after coming to Burlington he built a little laboratory and there for years he spent the long winter evenings in dissecting. He soon came to be recognized as one of the leaders in his chosen field. Few men attended medical meetings as faithfully as he. During his more active years he also spent much time at clinics in various medical centers. At medical meetings his pithy discussions always evoked keen interest for he delighted in stinging the essayist. He was equally ready to laugh when caught in his own trap.

In addition to his professional attainments he was an outstanding student of literature and history. Burns and Shakespeare were his hobbies, and he could quote voluminously from both of these writers, giving the source of the quotation. He made two trips to Burns' birthplace. Four years ago he was gratified by an invitation to read a paper on a local phase of Missouri history before the State Historical Society.

When not engrossed in some problem he greatly enjoyed the companionship of other men, and during his hours of recreation he was a delightful companion. His gruff exterior hid a warm heart. This is evidenced by the fact that he made possible the education of at least three physicians. Our local and state meetings will miss him.

George B. Crow, M.D.

NATION-WIDE SURVEY OF ACCIDENTS IN SCHOOL SPORTS

During the football season just closed the newspapers have announced some forty-three deaths resulting from participation in this sport. This tabulation has been greeted by editorial comment in many quarters picturing college athletics as murderous and suicidal and the allegations have been made that school boys have been sacrificed for the sake of gate receipts and the advertising of the institutions of learning. A more careful scrutiny of the fatalities indicates that in many instances deaths occurred where football was being played as a free-for-all sport and without regulation, which would suggest that at least

this one sport should be played under careful supervision or not played at all.

Fielding H. Yost of Michigan investigated the deaths of eight college players, eighteen high school players, and sixteen "sand-lot" players. He believes that football was the direct cause of about two-thirds of these deaths and only a secondary or contributing cause in the other one-third. He believes that open field tackling is responsible for most of these deaths and that modification of the rules should be established to correct this evil.

According to available data the injuries received show that internal injuries head the list. Broken necks or backs, head injuries, infections, and heart disease follow in the order named. It is, indeed, timely and of interest to note that accidents in school sports will receive attention from several official bodies, including the Intercollegiate Football Rules Committee, the American Football Coaches Association, the Society of Directors of Physical Education in Colleges, and an exhaustive nation-wide survey to be made under the auspices of the New York University. Professor Frank S. Lloyd, of New York University, is directing the work of the survey and is aided by a board of physical training experts. The essential purpose of the study is to establish procedures which should assist in the reduction of unnecessary accidents.

A CANCER RESEARCH IN INDIAN TIBET

On the "roof of the world" in Indian Tibet, where British medical records indicate cancer does not now exist, the Roerich Museum of New York is starting a unique biologic experiment.

There is a mystery about this Tibetan cancer-free district. Ancient books show that cancer once flourished there, and that it was fought with juices of plants and herbs.

These books never have been translated by moderns and the Roerich experiment will combine an expert translation with the latest scientific methods of studying the plants to check against the lost lore.

The books Dr. Roerich has gathered describe in great detail a disease not named but precisely like cancer. There are pages of descriptions and advice on how to treat the trouble with various plant remedies.

These books are of great antiquity, hand-written, the heritage of Lamas.

A DEPARTMENT OF UNIVERSITY RELATIONS AT THE UNIVERSITY OF MICHIGAN

The board of regents has appointed Dr. James C. Bruce, vice president to be in charge of university relations. This is a newly created position in which Dr. Bruce's duties will be to centralize all requests made to the university for outside aid and to help in meeting them so far as the university's resources allow.

Dr. Bruce for the last three years has been director of the department of post graduate medicine.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- * ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1931. Cloth. Price, \$1.00. Pp. 100. Chicago: American Medical Association.
- * THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1931—Volume XXIII. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Octavo Volume of 1231 pages with 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$13.00 net.
- * THE EXPECTANT MOTHER'S HANDBOOK—By Frederick C. Irving, A.B., M.D., Professor of Obstetrics, Harvard Medical School, Visiting Obstetrician, Boston Lying-in Hospital. 203 pages with illustrations. Boston and New York: Houghton Mifflin Company, The Riverside Press, Cambridge, 1932. Price, \$1.75.
- * MANUAL OF CLINICAL AND LABORATORY TECHNIC—By Hiram B. Weiss, A.B., M.D., F.A.C.P., Associate Professor of Medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio; and Raphael Isaacs, A.M., M.D., F.A.C.P., Associate Professor of Medicine, Assistant Director of the Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Mich. Fourth Edition, Reset. 117 pages, with Diet Table. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$1.50 net.
- * MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS—By Walter A. Bastedo, Ph.G., M.D., Sc.D., F.A.C.P., Assistant Clinical Professor of Medicine, Columbia University; Consulting Physician, St. Luke's Hospital, New York, St. Vincent's Hospital, Staten Island and the Staten Island Hospital; President, United States Pharmacological Convention, 1930-40. Third Edition, Reset. 739 pages with illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.50 net.
- * MEDICAL FORMULARY—By E. Quin Thornton, M.D., Assistant Professor of Materia Medica, Jefferson Medical College, Philadelphia. Thirteenth Edition, Revised. Lea & Febiger, Philadelphia, 1932. Pocket Size. Price, \$2.50.
- * NEW AND NONOFFICIAL REMEDIES, 1932, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1932. Cloth. Price, postpaid, \$1.50. Pp. 492. Ivi. Chicago: American Medical Association.
- * THE PRACTICAL MEDICINE SERIES—Comprising eight volumes of the year's progress in medicine and surgery. OBSTETRICS—Edited by Joseph B. De Lee, A.M., M.D., Professor of Obstetrics, University of Chicago Medical School. GYNECOLOGY—Edited by J. P. Greenhill, B.S., M.D., F.A.C.S., Attending Gynecologist, Cook County Hospital. Series 1931. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago. Price, \$2.50.
- * PRACTICAL TREATMENT OF SKIN DISEASES—With Special Reference to Technique by Eduard Ahlswede, M.D., New York and Hamburg, Formerly Assistant Physician, University Skin Department, 77 Illustrations, Paul B. Hoeber, Inc., New York—1932. Price \$12.00.
- * THE PURCHASE OF MEDICAL CARE THROUGH FIXED PERIODIC PAYMENTS—By Pierce Williams of the Staff of the National Bureau of Economic Research, Inc., assisted by Isabel C. Chamberlain, the National Bureau of Economic Research, Inc., New York, 1932. Price, \$3.00.
- * SURGICAL CLINICS OF NORTH AMERICA—(Issued serially one number every other month.) Volume 12. No. 2, (New York Number—April, 1932). 306 pages with 84 illustrations. Per Clinic year February, 1932, to December, 1932.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London; W. B. Saunders Company, 1932.

* Book Review in this issue.

BOOK REVIEWS

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1931

Cloth. Price, \$1.00. Pp. 100. Chicago. American Medical Association.

This volume contains the collected reports of the action of the Council on Pharmacy and Chemistry on all products which have been found unacceptable or which have been omitted from New and Nonofficial Remedies during the past year. It contains also the special reports authorized by the Council during the year and preliminary reports on articles which show promise but which are not yet ready for admission to New and Nonofficial Remedies nor suitable for general use by the medical profession. Among the reports on products found unacceptable are those on Thymophysin, a preparation of posterior pituitary and thymus, advocated as a safe and reliable means of accelerating delivery and marketed under false claims as to its essential action, as to its strength, and as to its safety for mother and child; on Bismuthoidal, claimed to be colloidal bismuth, and marketed with unwarranted claims of value in the treatment of syphilis intravenously; on Frenly Enema Cream, a complex, unscientific mixture, marketed under a therapeutically suggestive name with un-

warranted claims of therapeutic value in a host of conditions; on Hayner's Normaline, an unoriginal preparation of formaldehyde and zinc chloride marketed under a noninforming name without a quantitative statement of composition on the label or in the advertising and with unwarranted and misleading claims; on Pernocet, a barbituric acid product marketed under a therapeutically suggestive name and with unacceptable recommendations for intravenous use; on Solution Normet, an unscientific mixture of citrates, marketed with unwarranted claims; on Alqua Water, Calso Water, and Alka Water, irrational, proprietary "alkalizing" mixtures marketed with unwarranted and misleading claims. Perhaps the most noteworthy are the special reports, The Intravenous Use of Barbitol Compounds and The Average Optimum Dosage of Cod Liver Oil. The former gives the Council's considered verdict on the dangers and limitations of the use of barbitals intravenously and the latter gives the result arrived at from a questionnaire sent to leading pediatricians.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1931

Volume XXIII. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt,

B.A., M.A., M.D. Octavo Volume of 1,231 pages with 265 illustrations. Philadelphia and London. W. B. Saunders Company, 1932. Cloth. \$13.00 net.

The aim in selecting material for this volume has been, as in previous year, to produce a work which would be useful to the general practitioners, diagnosticians and general surgeons. During the year 1931 there were five hundred and seventy-seven papers written by members of the clinic staff, and of this number ninety-nine are reprinted in full in this volume.

It has been felt by the editors of this work that many of the papers, important in themselves but mainly of interest to specialists, should not be included in full in the text and for this reason thirty-six articles are abridged, forty-three are abstracted, and three hundred and ninety-nine are given by title only. A convenient classification or grouping of papers has been effected, rendering the subject material more readily available to those particularly interested in one branch of practice. The first section deals with the alimentary tract, followed in order by sections dealing with the genito-urinary organs; the ductless glands; blood and circulatory organs; skin and syphilis; head, trunk and extremities; chest; brain, spinal cord and nerves; a group of articles dealing with technic, and a concluding section of miscellaneous papers.

To attempt to designate any article as outstanding would be preposterous, since the entire volume is a storehouse of medical information and research. These collected papers from the Mayo Clinic are probably the most outstanding contribution of the year to medical education, and as such should be welcomed enthusiastically by every progressive physician.

THE EXPECTANT MOTHER'S HANDBOOK

By Frederick C. Irving, A.B., M.D., Professor of Obstetrics, Harvard Medical School, Visiting Obstetrician, Boston Lying-in Hospital. 203 pages, with illustrations. Boston and New York. Houghton Mifflin Company. The Riverside Press, Cambridge, 1932. Price, \$1.75.

This handbook for expectant mothers is an excellent treatise on obstetrics. It is written in an ethical manner and is intended not to instruct the patient in self examination or treatment, but advises her to visit her physician for such things.

It discusses the physiology and hygiene of pregnancy and childbirth in simple terms, easily understood by any intelligent mother.

There is some question whether such a book in the hands of the laity might not be used as a substitute for the instruction that rightfully belongs to the family physician.

F. W. R.

MANUAL OF CLINICAL AND LABORATORY TECHNIC

By Hiram B. Weiss, A.B., M.D., F.A.C.P., Associate Professor of Medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio; and Raphael Isaacs, A.M., M.D., F.A.C.P., Associate Professor of Medicine, Assistant Director of the Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Mich. Fourth Edition, Reset. 117 pages, with Diet Table. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$1.50 net.

This small manual has been developed upon unusual lines, in the fact that the tests are compiled with the thought that the book may be used as a guide for the standardization and correlation of work, rather than as a textbook of clinical microscopy. It is proposed that by following this manual the physician will provide a systematic study of his patient—particularly, from the standpoint of laboratory diagnosis. The tests are those in most common use and only essential details are given, serving to recall the more comprehensive material studied in the class room or derived from larger textbooks on the subject.

The reviewer is impressed with the fact that the author in order to secure small compass for his work has left out detail which will be indispensable to many of the older practitioners untrained in laboratory methods. The newer graduate skilled in laboratory procedures will find adequate detail for any of the laboratory procedures outlined. Subject indices will indicate the scope of this work: Notes on history taking; outlines for routine physical examination; routine urine analysis; body fluids; blood examination; blood grouping; examination of gastric contents; stool analysis, examination of sputum; spinal fluid; liver and kidney function tests; basal metabolism; technic of paracentesis; intravenous injection. A closing section of the book is devoted to a table of nutritive value of foods which should prove of great value to any physician since it outlines various food elements indicating their chemical values, their acid or base excess and their vitamin value.

This volume is recommended for the purpose for which it has been designed.

MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS

By Walter A. Bastedo, Ph.G., M.D., Sc.D., F.A.C.P., Assistant Clinical Professor of Medicine, Columbia University; Consulting Physician, St Luke's Hospital, New York, St. Vincent's Hospital, Staten Island and the Staten Island Hospital; President, United States Pharmacological Convention, 1930-40. Third Edition, Reset. 739 pages

with illustrations. Philadelphia and London. W. B. Saunders Company, 1932. Cloth, \$6.50 net.

This well established text is now in its third edition, which bespeaks its popularity. Revisions have been necessary because of the many important and recent advances which have been made in this branch of medical science. New articles have been added on suprarenal cortex, ephedrin, quinidin, plas-mochin, yatren, ethylene, the barbiturates, pre-anes-thetic narcotics, carbon dioxid, carbon tetrachlorid, the antiseptic dyes, mercurochrome, metaphen, the mercury diuretics, phenylhydrazine, insulin, ovarian preparations, colloidal lead in cancer and a number of other remedies that have attained therapeutic interest. Special articles have been introduced on alkalies in stomach treatment, alkali substitutes in stomach treatment and the effect of atropin on the stomach. The endocrine drugs have not been considered as a class, but have been introduced where they seemed to belong, pharmacologically or therapeutically.

The same clinical attitude which has rendered the earlier editions of this work of outstanding value has been maintained in the present edition. The treatise is divided into three parts, the first giving a general consideration of the scope of pharmacology and pharmacologic treatments; the second is devoted to a consideration of the individual remedies; and the third part, covering some twenty-five pages, is devoted to prescription writing.

This volume in its present revision continues to be one of our outstanding treatises upon this valuable subject.

MEDICAL FORMULARY

By E. Quin Thornton, M.D., Assistant Professor of *Materia Medica*, Jefferson Medical College, Philadelphia. Thirteenth Edition, Revised. Lea & Febiger, Philadelphia, 1932. Pocket Size. Price, \$2.50.

The young physician new from his medical school has in his own formulary only a limited number of prescriptions of which he can know their full therapeutic action. There is a tendency in many instances for such a physician to resort to proprietary remedies rather than to compound prescriptions, fulfilling his therapeutic needs.

The older physician frequently employs rather routinely, prescriptions of known value to him, disregarding oftentimes the newer developments in the field of therapeutics. It is valuable, then, both for the newer graduates and for the older practitioners to have at hand a convenient compilation of well tried prescriptions for reference.

For many years the work by Dr. Thornton has been received by thousands of physicians to fulfill this need. The fact that this volume is now in its thirteenth edition, bespeaks the reception which has been accorded it. The older form of arrangement, namely, with the diseased conditions arranged alphabetically has been continued in this edition. The prescriptions are written in both the apothecary and in

the metric system. The specific indication for each individual prescription is listed in doses suitable for the average adult patient. It will be found valuable for any physician to have a copy of this Medical Formulary handy upon his desk for ready reference.

NEW AND NONOFFICIAL REMEDIES, 1932

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1932. Cloth. Price, postpaid, \$1.50. Pp. 492. lvi. Chicago. American Medical Association.

The recognition of a preparation for inclusion in this book singles it out from the host of new products of the pharmaceutical manufacturers as being a worth-while addition to the existing armamentarium of the practicing physician. To be thus distinguished it must be shown, under the impartial scrutiny of the carefully chosen group which is the Council on Pharmacy and Chemistry, that it has acceptable evidence of therapeutic usefulness and that it is marketed in accordance with the honesty and straightforwardness envisaged by the excellent Rules which have been the outgrowth of the Council's quarter century experience in appraising the merits of new drugs.

In accordance with its custom of keeping the annual editions of New and Nonofficial Remedies in the forefront of current medical thought, the Council offers in this volume the newly revised articles: Bar-bital and Barbitol Compounds; Fibrin Ferments and Thromboplastic Substances; Liver and Stomach Preparations; Mercury and Mercury Compounds; and Ovary. Perhaps the most noteworthy new preparations admitted are: nupercaine-Ciba, a local anes-thetic; pentobarbital sodium, a barbituric acid derivative; and iopax, a new preparation for roentgeno-logic use. All of the ovary preparations formerly described are omitted and none of the new standardized preparations is described, although the names Theelin and Theelol are recognized in the revised general article. Another change of importance is the classification of articles formerly listed as "Ex-empted" under the heading "Accepted but Not De-scribed." There is the usual excellent index and the augmented Index to Proprieties Not Included in N. N. R.

THE PRACTICAL MEDICINE SERIES

Comprising Eight Volumes of the Year's Progress in Medicine and Surgery. OB-STETRICS, edited by Joseph B. De Lee, A.M., M.D., Professor of Obstetrics, Univer-sity of Chicago Medical School. GYNE-COLOGY, edited by J. P. Greenhill, B.S., M.D., F.A.C.S., Attending Gynecologist, Cook County Hospital. Series 1931. The Year Book Publishers, Inc., 304 South Dear-born Street, Chicago. Price \$2.50.

Much need not be said about the very excellent resume of every worth-while article on Obstetrics

and Gynecology published during each current year, together with the author, the magazine, the volume and the month from which it was taken. This makes it easy to find and read the original article if one is desirous of doing so.

Much additional information can be obtained from the remarks by the editors as to the value of the ideas presented by the various authors.

F. W. R.

PRACTICAL TREATMENT OF SKIN DISEASES

With Special Reference to Technique by
Eduard Ahlswede, M.D., New York and
Hamburg, Formerly Assistant Physician,
University Skin Department, 77 Illustrations,
Paul B. Hoeber, Inc. New York,
1932. Price, \$12.00.

Practically every text written on the subject of skin diseases devotes a considerable portion of space to the treatment of these ailments. To our knowledge, however, this volume is the only one which has been prepared exclusively from the standpoint of dermatologic treatment. The author with a generous background of experience presents in this volume those forms of dermatologic treatment which have in his experience been of outstanding worth.

The text follows, for the most part, the teaching of the German school, particularly that of Professor P. G. Unna of Hamburg. Part I of the book is devoted to such general considerations of treatments as the technic of local treatment, the various modes of applying chemical agents to the skin, the internal treatment of dermatologic conditions, non-specific treatment, etc. Part II deals with the treatment of individual diseases presenting the diseases in alphabetical order. Prefacing the section actually devoted to treatment under these various titles, one finds a very brief description of the disease, its etiology and prognosis. The prescriptions offered in the text are written in the metric system, with specific instruction relative to their indication and use.

The terminology used in the text, particularly regarding the eczemas, will not entirely coincide with the present American teaching. However, those experienced in dermatologic conditions will experience no confusion since, for the most part, the term eczema is appreciated as a collective name applied to various reactions of the skin by many agents. In the closing section of the book is a collection of the more important prescriptions of Dr. Unna. The volume is thoroughly indexed.

THE PURCHASE OF MEDICAL CARE THROUGH FIXED PERIODIC PAYMENTS

By Pierce Williams of the Staff of the
National Bureau of Economic Research,
Inc., assisted by Isabel C. Chamberlain, the
National Bureau of Economic Research, Inc.,
New York, 1932.

This report comprises a study conducted by the

National Bureau of Economic Research over a period of five years. The study was invited by the Committee on the Costs of Medical Care, who felt that the bureau was in a unique position to study in an unbiased way this particular problem. The report describes in detail several plans by which individuals, in consideration of a fixed amount paid periodically to some organization, are assured of medical or hospital care from that organization in case of incapacity due to injury or disease not already covered by the workmen's compensation laws.

In the words of Secretary Olin West of the American Medical Association, "The delivery of adequate scientific medical service to all people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life" is the great outstanding question before the medical profession today.

This volume furnishes a storehouse of information, comprehensive and unbiased, dealing with this important problem. Since every proposed plan of voluntary or compulsory health insurance will in its ramifications involve the economic prosperity of every physician in the United States, this problem is one which should receive not only universal study but also the most serious thought. This volume is highly recommended for the student in the problems of medical insurance or the plan of voluntary or compulsory sickness insurance.

SURGICAL CLINICS OF NORTH AMERICA

(Issued serially one number every other month.) Volume 12. No. 2. (New York Number—April, 1932.) 306 pages with 84 illustrations. Per Clinic year (February, 1932, to December, 1932.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

This number contains several high class articles covering quite a range of subjects. Dr. Allen O. Whipple discusses at length the results of short-circuiting for common duct obstruction.

Drs. Joseph F. McCarthy and J. Sidney Ritter present the technic of endoscopic revision of prostatic obstruction.

There are three symposia which are valuable. One on liver and gall-bladder, which covers jaundice, the interpretation of chemical analyses of blood and urine of cases exhibiting jaundice and disturbances of liver function, liver changes in abdominal disease and preoperative and postoperative care of biliary tract and liver cases.

The symposium of diseases of the thyroid includes, hyperthyroidism, the clinical classification of goiter, iodine in goiter and preoperative and postoperative treatment in goiter cases.

The symposium of diseases of the breast includes, chronic cystic mastitis, cancer of the breast, and glandular therapy in diseases of the breast.

F. W. F.

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DES MOINES, IOWA, OCTOBER, 1932

No. 10

PRESENT DAY KNOWLEDGE OF BLOOD CELL FORMATION AND PATHOLOGY*

HAL DOWNEY, Ph.D., Minneapolis.

Mr. President, members of the Iowa State Medical Society: I am very glad to have a chance to talk morphologic medicine, which you are probably not in the habit of studying, because I am convinced there is very much in morphologic hematology that is of direct application to the practice of medicine.

The title that was given me is a rather large order. I do not expect to cover everything on the origin of blood cells or their pathologic modification, but I shall try to simplify a few of the things which seem to be extremely complicated when we read about them in the larger handbooks of hematology. You will find that when we have the subject lined up in pictures and diagrams, it is after all not so terribly complicated, at least not the part which you will use for laboratory diagnosis of blood cases.

I have hung up in the exhibition room colored charts of some of the lantern slides that I am showing. Of course, they show up much better in colors than they do in black and white, but these slides will give some idea of the sort of thing I am talking about.

Figure 1 is a scheme to show the normal relationships of the blood cells as we find them in the normal adult. It is a chart worked out by one of my former graduate students, who, by the way, happened to be a dentist, Dr. Irwin A. Epstein. It is a rather clever arrangement.

Right in the center we have the reticulo-endothelial cell. The reticular connective tissue is the mother tissue of all the blood cells. In the normal adult it is difficult to see actual transitions from this reticulum to the blood cells, for the reason that regeneration is taken care of largely by mitosis in these older stages. However, if you hunt long enough, you can find some examples,

and, particularly for the lymphocytes, you may find transitional stages between reticulum and lymphocytes. The so-called myeloid cells, that is, the cells of the bone marrow, regenerate from a parent cell which we call the myeloblast, and that in turn comes from the reticulo-endothelial cell.

Normally there are a certain number of these myeloblasts present in the adult marrow, but there

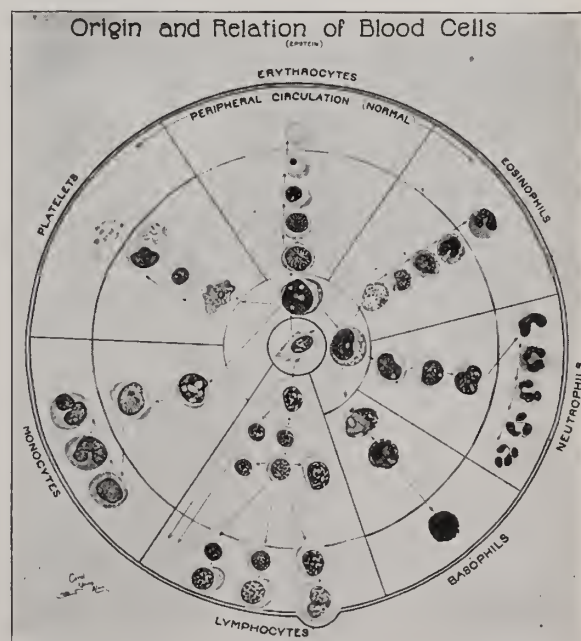


Fig. 1. Origin and relations of blood cells in the normal human adult. Arranged by Dr. Irwin A. Epstein.

are not many. You have to hunt a long time to find them. In the marrow of the new-born and young children, they are quite numerous.

The regeneration of all of the cells belonging to this myeloid, or bone marrow series, takes place from these cells, and by mitosis of the older derivatives. That means that we normally have present in the bone marrow, cells which are extremely immature, and it means that cells of that type can be sent out into the blood stream whenever there is sufficient stimulus. That is why we some-

*Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

times find in benign leukocytosis that we have a good many myelocytes, and occasionally even promyelocytes. We sometimes have cases which we call leukemoid reactions, in which the blood picture is very much like that of myelogenous leukemia. These cases are not genuine leukemia, because the patients recover, and yet we might find myeloblasts, very young reds, and the so-called leukoblasts, promyelocytes, and myelocytes.

We happened to have three cases of that type in St. Paul, all in one family. They were cases of scabies in a mother and two children. The patients were given mercurial ointment, and after the second application they all became very sick, and the blood picture was that of a myelogenous leukemia. The daughter, aged ten, showed a marked hemorrhagic tendency and had a high percentage of myeloblasts and leukoblasts in the blood and a great increase in the basophils. So, hematologically, you would say that was subacute myelogenous leukemia.

The mother had a great many basophils and monocytes.

The eight-year-old boy had many myeloblasts and leukoblasts. These patients all got well. You can understand that sort of a picture when you see that normally we have the young stages present in the bone marrow. Whenever the barrier between the bone marrow and the circulation is broken down, then these young forms can escape into the blood stream.

Ordinarily in leukocytosis we get a shift to the left only as far as the myelocyte, and we do not expect to get those very early forms.

We might say a little about the different types of leukemia. Myelogenous leukemia is characterized by hyperplasia of the very young forms and, of course, marked alteration in the blood-forming tissues. The diagnosis depends on the quantitative change rather than on the qualitative change.

In the ordinary chronic myelogenous leukemia all three types of granular leukocytes are affected. They all come from the same stem cell. Occasionally you see a good many normoblasts, and you may get megakaryocytes, the giant cells from which the platelets are formed. The myelogenous leukemia, instead of involving the entire myeloid system, might be a little more selective for one type of cell. Then we have neutrophil leukemia which involves nothing but the neutrophils. Eosinophil leukemia we might postulate theoretically, but actually no eosinophil leukemias have been reported. Three or four cases of basophil leukemia have been reported, two or three in the Italian literature, one in the French and I think one in the American literature.

Then the leukemic process may affect the red cells, so that practically the only division of the myeloid system affected is the line of reds, the normoblasts and the mature reds. Some cases of polycythemia, the so-called erythemias are of that type. They are varieties of myelogenous leukemia which may begin with a polycythemia and terminate as chronic myelogenous leukemia, with anemia.

We have plenty of evidence to indicate that monocytes are derived from the myeloblast, so that leukemia affecting the monocytes would give us very young monocytes in the blood.

The more acute the leukemia, the greater the shift to the left, and the more of these very early forms we have. Thus we might get acute leukemias with practically nothing but myeloblasts in the blood and possibly a few of the next stage, the so-called leukoblasts.

The shift to the left may go beyond the myeloblast and may affect the mother tissue from which the blood cells are derived, and then we have a leukemia affecting the reticulo-endothelial system. Cases of this type are the so-called leukemic reticulo-endotheliosis, and because the reticular cells may develop into monocytes, they are sometimes referred to as monocytic leukemia of the Schilling type.

The lymphocytes occupy a very peculiar position. Ordinarily they have no relationship with the myeloblasts. The lymphocytes regenerate homoplastically; that is, any type of lymphocyte is capable of division in the tissue, but not in the blood stream. In the tissue any mature lymphocyte, large or medium size, may divide. That means that in the normal lymphatic tissues and organs, we have no cells which should be called lymphoblasts. We have a few intermediate stages between reticulum and large lymphocytes, but those cells do not look like myeloblasts. There are so few of them that we are really not justified in speaking of lymphoblasts under normal conditions. This means that we may get extensive lymphocytosis, benign in character, without the appearance of any immature lymphocytes. The lymphocytes in the tissues are exactly like those out in the blood stream. You may get up to 92 per cent of lymphocytes in the blood with a total leukocyte count to about 45,000. In spite of these high counts there will be no young cells present in lymphatic reaction, whereas on the myeloid side, because of the presence of young cells in the normal marrow, you might get the young cells out in the blood in a condition which is not leukemic.

In lymphatic leukemia something happens to upset the regeneration of the lymphocytes as it takes place normally. Then the lymphocytes be-

come connected with the myeloblast(and to represent that condition we would have to have a line running from the myeloblast to the large lymphocytes. Then we would have various intermediate stages. We can call those cells lymphoblasts. That term "lymphoblast" is used rather indiscriminately, and has got us into a lot of trouble. Sometimes it is used to describe the large lymphocytes which we get in infectious mononucleosis or glandular fever.

The next lantern slides will give us a few examples of these different conditions.

Figure 2 shows a series of three cases of benign lymphocytosis. I want you to notice the types of lymphocytes. Case I had all the clinical features of acute leukemia, with hemorrhage from the gums, and large spleen and lymph nodes. There was a low total leukocyte count of 3,000, with 85 per cent lymphocytes, when I first saw the patient.

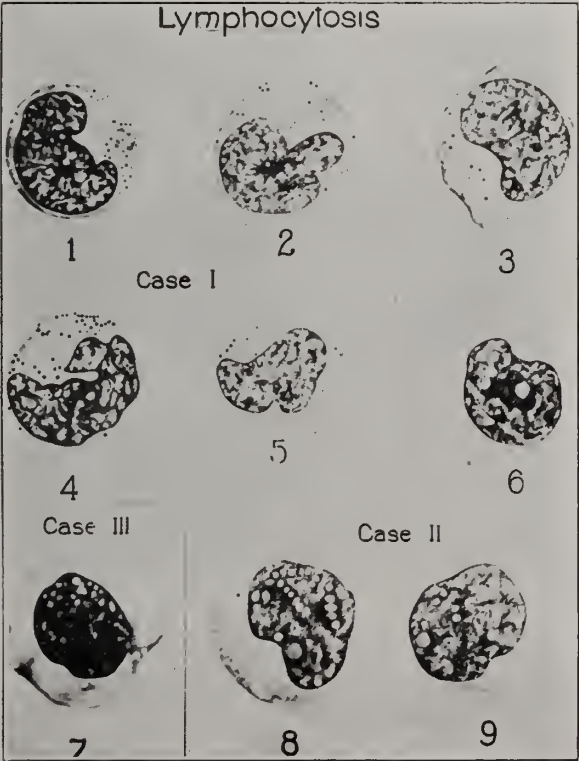


Fig. 2. The characteristic atypical lymphocytes from 3 cases of acute benign lymphadenosis (infectious mononucleosis). Cells 8 and 9 are slightly immature.

A few days later the lymphocytes went up to 92 per cent, but they were all mature forms. You notice the nuclear pattern is rather coarse and is nothing like the pattern we get in the myeloblast. The nuclei are lobulated. In the color charts you will see that the cytoplasm is quite vacuolated and basophilic.

In case III another type of cell is illustrated.

In one case of the series (Case II) there was an occasional young cell, but these were not sufficiently numerous to cause us to consider leukemia as a possible diagnosis.

Figure 3 shows a case which really was acute lymphatic leukemia, the case of a prominent physician in Minneapolis. He had exactly the same total leukocytes as the previous case, about 3,200,

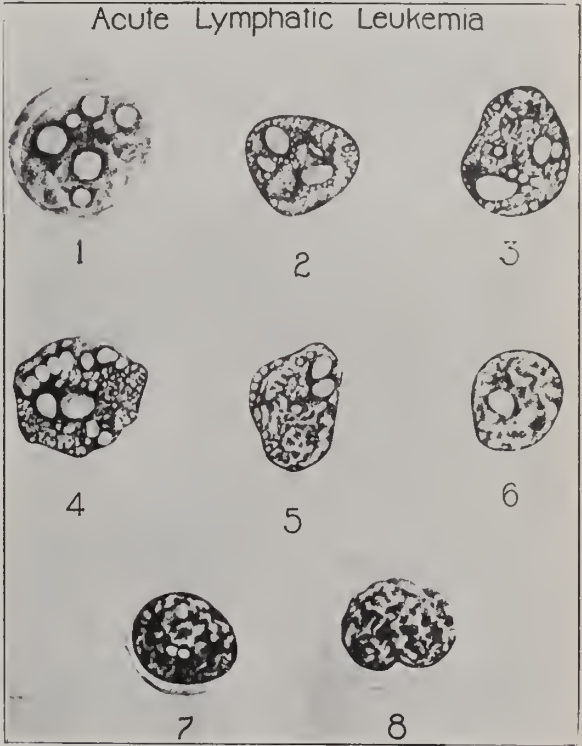


Fig. 3. Acute lymphatic leukemia. Cells 1, 2, 3 are very immature, cells 4, 5, 6 are intermediate and cells 7 and 8 are mature lymphocytes identical with those of normal blood. Cell 1 is practically identical with the myeloblast of myelogenous leukemia.

with 85 per cent lymphocytes. The percentage of lymphocytes kept going up. The case was diagnosed as Vincent's gingivitis and pyorrhea. No one suspected acute leukemia until we began studying the blood. He had a few immature lymphocytes and had some atypical forms, and he had some that were practically identical with myeloblasts. That is the type of cell I would be willing to call lymphoblast. That type of cell you find only in lymphatic leukemia; in the acute types they are numerous.

We may conclude from cases like these that the total counts and the differential counts really mean very little from the standpoint of diagnosis from the blood smear. A study of the character of the cells is much more important.

Figure 4 illustrates another acute lymphatic leukemia in which we have young lymphocytes.

Those cells are not quite like myeloblasts, and still we can recognize them definitely as very young lymphocytes, so one should diagnose acute lymphatic leukemia on such a blood picture.

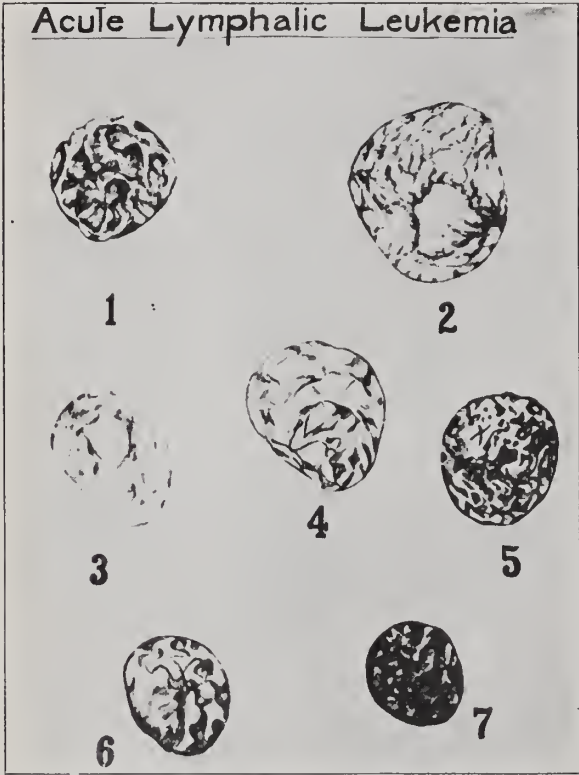


Fig. 4. Acute lymphatic leukemia. All of these lymphocytes are "immature" but they have not been completely dedifferentiated to the myeloblast stage.

Figure 5 shows a case in which practically all of the cells were of the myeloblastic type. This was an acute myelogenous leukemia, but it might just as well have been an acute lymphatic leukemia, because in both of those conditions you may get identical blood pictures. In other words, in the acute lymphatic leukemia, the cells present may not be any different from myeloblasts. They are absolutely identical, and nobody can tell the difference. If a few mature cells were present one might be able to trace the differentiation from the young cell to the older cell and thus determine the lymphatic or myelogenous nature of the case. The nucleoli are important when they are present. This rather diffuse, sieve-like distribution of chromatin is characteristic of the nucleus of the stem cell, which may be either lymphoblast or myeloblast.

The cells in figure 6 are from a case of ordinary chronic myelogenous leukemia. The first two cells are typical myeloblasts. The myeloblasts sometimes have very coarse myeloid azure granulation, and so they are frequently mistaken for myelo-

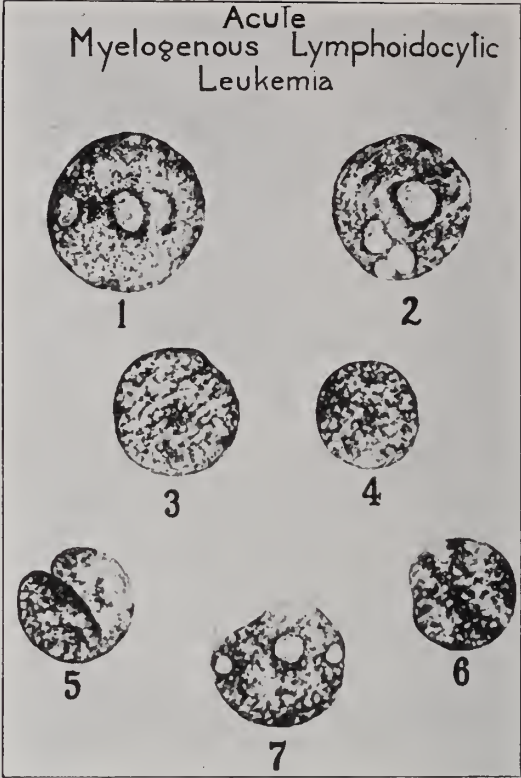


Fig. 5. Acute myelogenous leukemia. All of these cells must be classified as myeloblasts. The diffuse distribution of the nuclear chromatin, rather than its quantity, is characteristic.

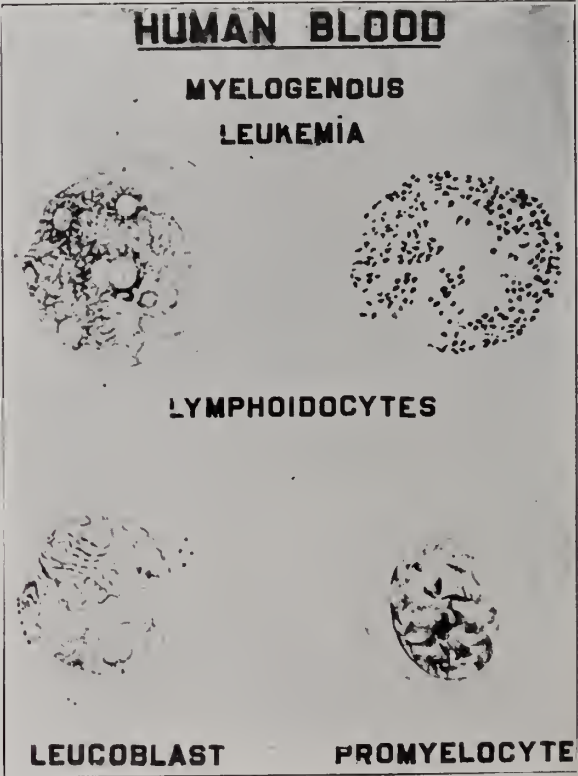


Fig. 6. Chronic myelogenous leukemia.

cytes. But we never see that type of granulation in a myelocyte. It is a peculiar type of granulation that occurs only in myeloblasts and leukoblasts. In the leukoblast, which has a characteristic nuclear pattern, we still have a few of these granules but in the promyelocyte they disappear.

I want to say a little about the behavior of the reticulo-endothelium and how it may affect the blood picture. Cells like those in figure 7 are what we see in subacute bacterial endocarditis. Nearly every case, if followed from day to day, will show

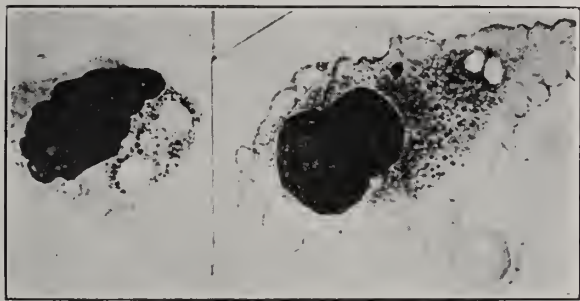


Fig. 7. Reticulo-endothelial cells in the blood from a case of subacute bacterial endocarditis.

some of these cells in the blood. They are reticulo-endothelial cells which have been shed into the blood. Some of them come from the liver. They become phagocytic, and you frequently find red corpuscles in the cells. They have a very peculiar chromatin pattern in the nucleus and a peculiar cytoplasm, peculiar granulation, and irregular outline and rather foamy cytoplasm which is extremely soft and is easily distorted. They are very characteristic cells. Anybody could identify them.

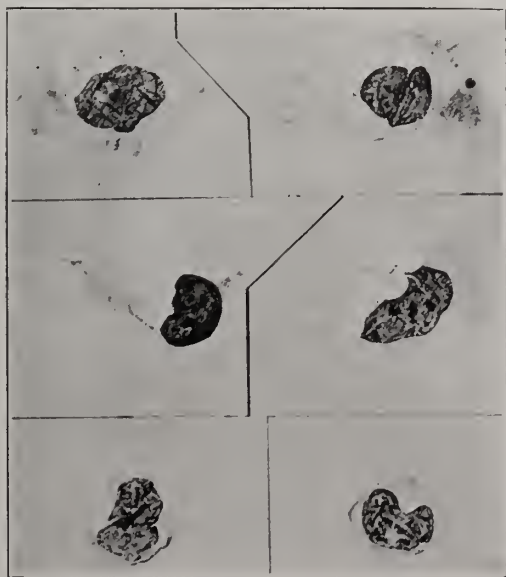


Fig. 8. Reticulo-endothelial cells differentiating to monocytes in subacute bacterial endocarditis.

In toxic reactions of the reticulo-endothelium, you might get a few of those cells in the circulation or might get many of them. As high as 25 per cent of the cells may be of that type. They show a rather marked tendency to develop into large mononuclear leukocytes. So, in subacute bacterial endocarditis, you might find intermediate stages between those cells and the large mononuclears.

Figure 8 also illustrates subacute endocarditis. We have the same reticulo-endothelial cells, the same peculiar nucleus. We can trace intermediate stages between the monocytes and these reticulo-endothelial cells. It may be difficult to distinguish between this type of disease and one which develops into a genuine leukemia, the leukemic reticulo-endotheliosis. The characteristic feature of this would be excessive differentiation of the reticular cells into blood cells of one type or another. They might be monocytes, lymphocytes, or atypical cells of some sort.

Figure 9 shows a monocytic leukemia, a Mayo Clinic case, of the Naegeli type. In other words, the monocytes in this case develop from the myeloblast. Even the myeloblast has some monocytic characters. You see the typical slate color in the

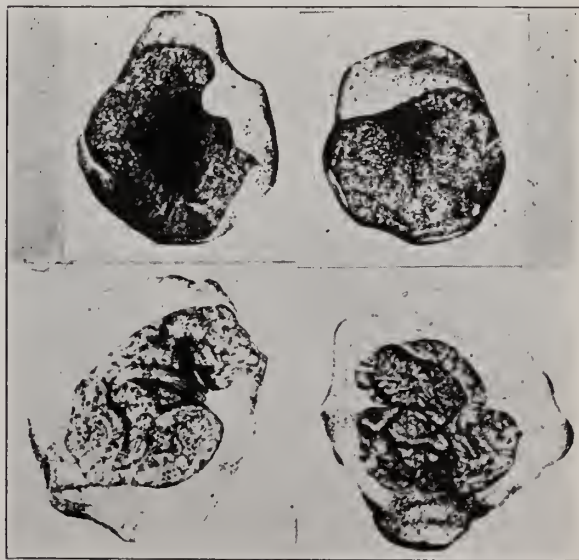


Fig. 9. Monocytic leukemia of Naegeli type (a variety of myelogenous leukemia in which the myeloblasts differentiate to monocytes). Intermediate stages between myeloblast and atypical monocyte.

cytoplasm and azure dust sprinkled over the cell, which is typical of the monocytes. You also see intermediate stages between cells of that type and cells of this sort which are not normal monocytes, but they are more monocytic than anything else. We are justified in calling such a case monocytic leukemia. They occur every once in a while, and

they may cause difficulties in diagnosis. I have had blood smears from several sent in from various parts of the country.

Figure 10 shows another type of monocytic leukemia (a Cleveland Clinic case), starting out from a cell which is a cross between a reticulo-endothelial cell and a myeloblast. That cell is not quite like the myeloblast or the reticulo-endothelial cell. The reticulo-endothelium probably de-



Fig. 10. Monocytic leukemia. Cell 1 intermediate between reticulo-endothelial cell and myeloblast. Cell 2 shows more reticulo-endothelial characters, and cells 3 and 4 are intermediate between such cells and genuine monocytes (cell 5).

veloped into myeloblasts or something between a myeloblast and a reticulo-endothelial cell and from there into typical monocytes. This is a monocytic leukemia in which there was a high percentage of monocytes, and intermediate stages between them and cells 1 and 2, which are a cross between the reticulo-endothelial cells and myeloblasts.

In some cases the differentiation does not get any further than cells 1 or 2; that is, the development will stop right there. I will show you a case of that type.

Figure 11 illustrates one of them. It is a University of Chicago case. It had a very character-

istic blood picture, with a very high count. As I remember, it was over 100,000. A very high percentage of the cells were of this type. There was practically nothing else in the blood but cells of that type. If you look at the nuclear pattern of those cells you will see that it is something like that of the myeloblast, yet, after all, it is more like the nucleus of the reticulo-endothelial cells which we see in subacute endocarditis. The nucleus has changed. You will see the cells represent something intermediate between the connective-tissue cell and the myeloblast. The cytoplasm is very soft, just as it was in the cells of the subacute endocarditis case. Then we find the cells with pseudopodia, and the larger cells. When pieces of those are cut off you find isolated masses of protoplasm which may contain azure granules but no nucleus.

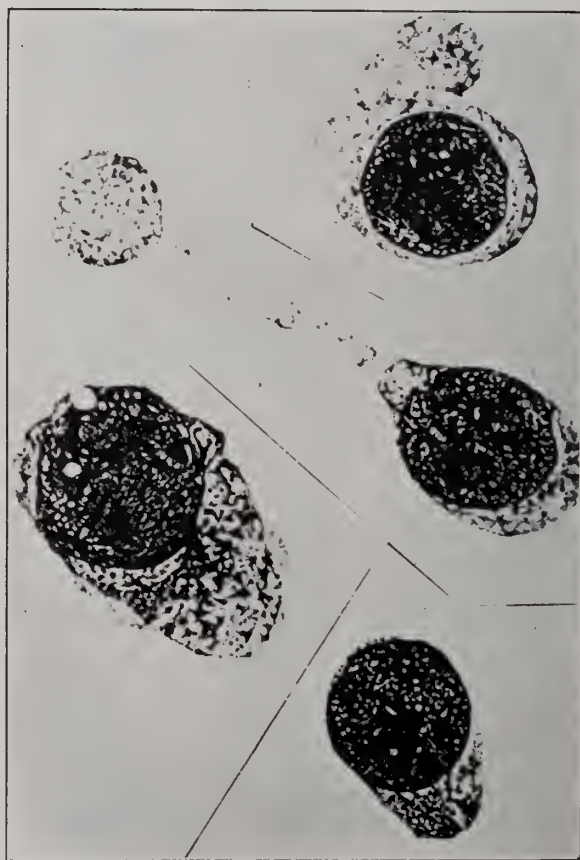


Fig. 11. Leukemic reticulo-endotheliosis. These cells show some differentiation toward the myeloblast.

Here is another case that happens to be from the Minneapolis General Hospital (figure 12). It is one case that we fell down on and one in which we learned more by our mistakes than we did from our successes. There were not very many of those cells in the blood, and the condition was not

recognized, because not enough time was devoted to the study of the blood smears. Every time they were examined a few peculiar monocytes were found but they had little significance for us at the

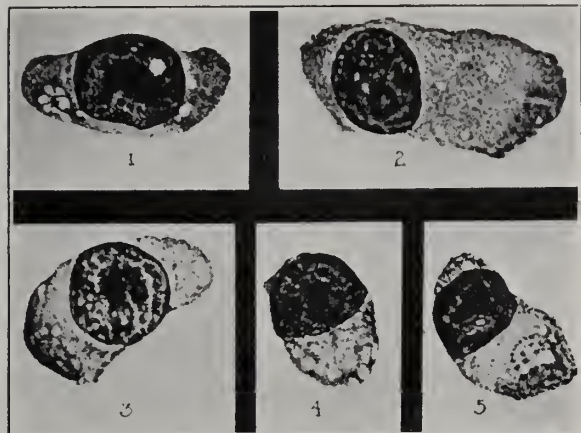


Fig. 12. Leukemic reticulo-endotheliosis. These cells are intermediate between reticulo-endothelial cells and plasma cells.

time. After the patient died and we studied the organs histologically, we went back to the blood and found those cells shown on the slide.

They have peculiar cytoplasm, with reddish azure granulation. It looks as though these cells were trying to develop into plasma cells. I would call those cells something intermediate between the reticulo-endothelial cell and the plasma cell. They are not like any normal blood cell that you have ever seen.

In figure 13 you will see some more cells from that same case. Some of the reticulo-endothelial

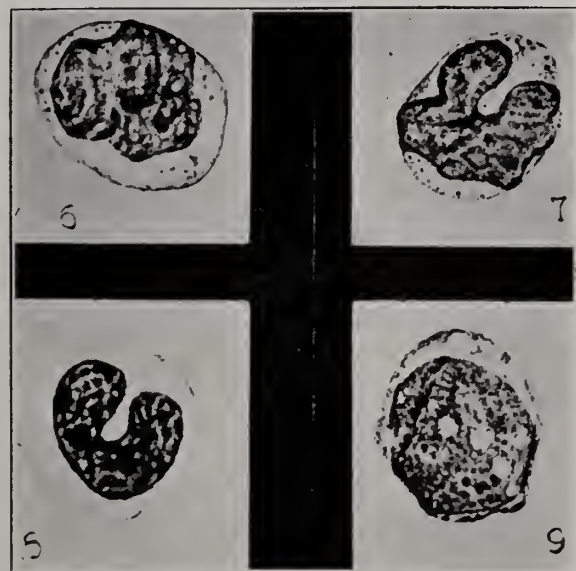


Fig. 13. Same case as Fig. 12. Differentiation of monocytes (cell 8) from reticulo-endothelial cells having some myeloblastic characters (cell 9).

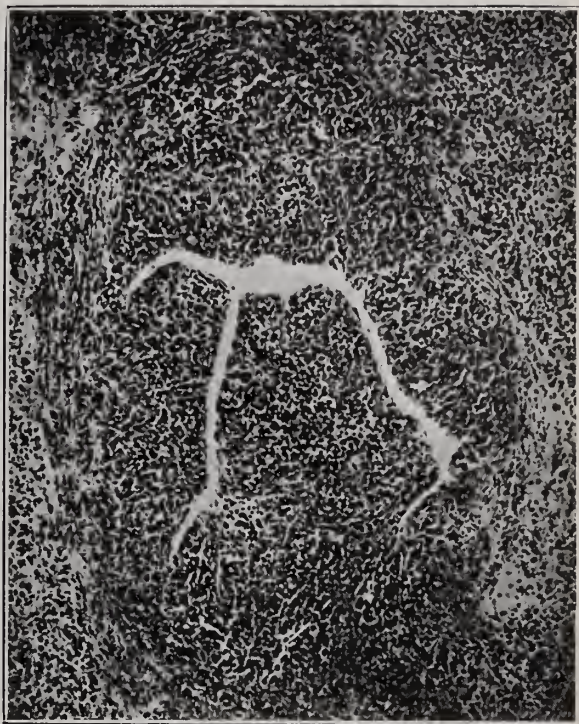


Fig. 14. Spleen from case of reticulo-endotheliosis (low power). Blood picture of this case shown in Figs. 12 and 13.

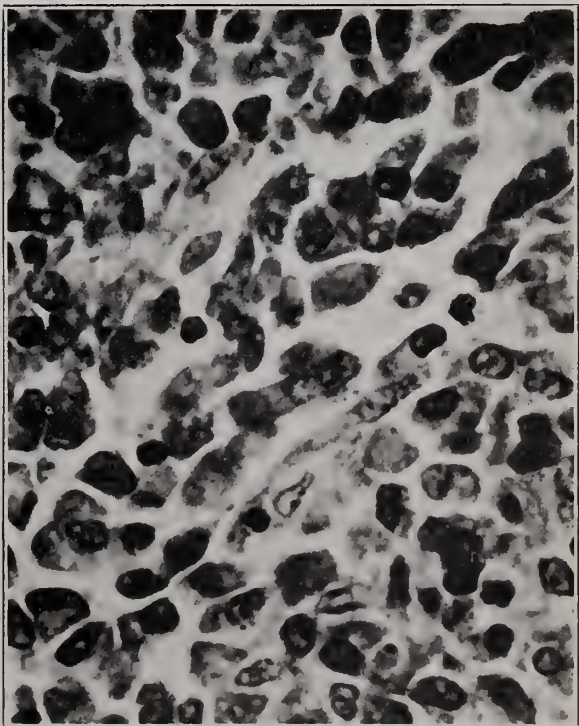


Fig. 15. Spleen pulp from same case as Fig. 14. Note the very long cell near the center of the field.

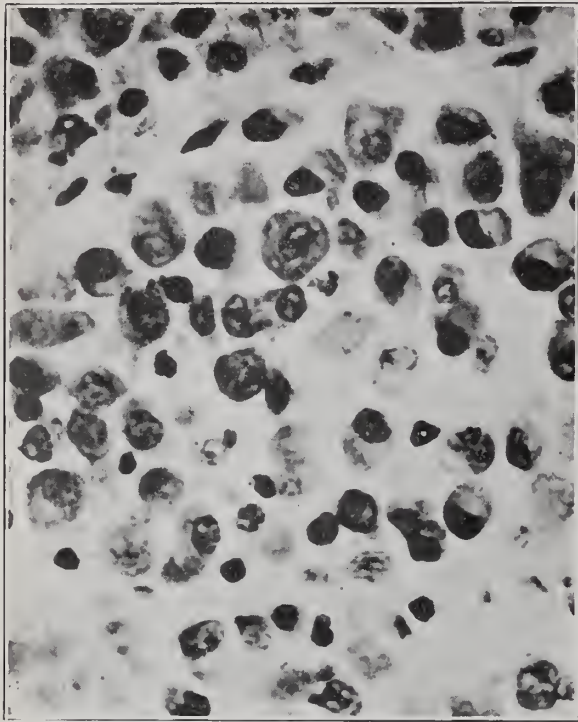


Fig. 16. Leukemic cells in splenic sinus. Same case as Figs. 12-14.

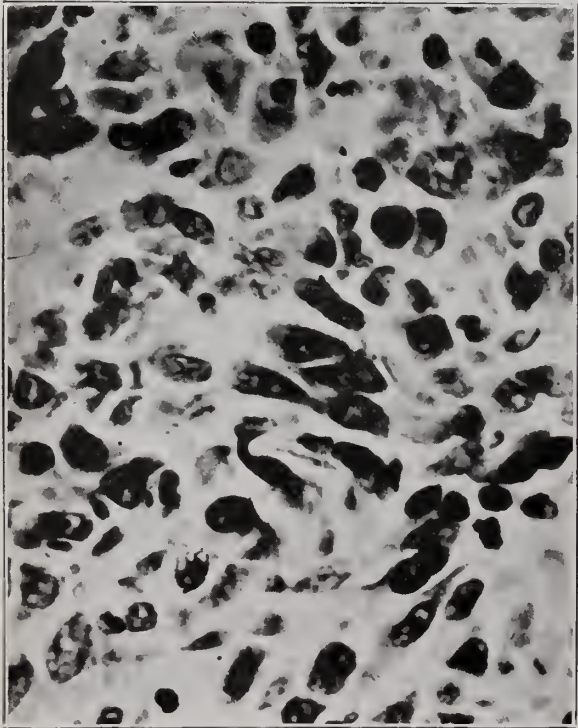


Fig. 17. Same case as Fig. 16. Origin of free leukemic cells from the reticulo-endothelium of spleen pulp.

cells differentiated into cells like myeloblasts, and these latter into monocytes. The monocytes were the only cells we saw when we made our first studies on that case. The ones shown on the previous slide were found later.

The next two figures show the histology of the organs in this case. In figure 14 the spleen is full of masses of cells, sometimes concentrated around blood vessels. We find all sorts of intermediate stages between those cells and the reticulo-endothelial cells.

Figure 15 shows one of the cells that is extremely long, evidently just being cut off from the reticulum. We have more of those in various places. It is very easy in those places to work out the origin of those cells from the reticulo-endothelium. There is no question about the diagnosis.

In figure 17 are some more cells from that same case. The reticulum is undergoing hyperplasia, and cells are being cut off from this reticulum.



Fig. 18. Origin of basophilic stippling in experimental lead poisoning. (After Ferrata.)

Now a few more things that have no relation to what has been said previously, things that cause some confusion in diagnosis and interpretation. Figure 18 is taken from a case of experimental lead poisoning in a guinea pig. It shows the basic stippling which is of some importance in the diagnosis of lead poisoning. In the cases of lead poisoning which I have seen there was no marked

abnormal morphology of the reds, except that some of them were stippled. There was no poikilocytosis, and none of the other severe alterations that we expect to get in the anemias which we call toxic anemias.

The normoblast, of course, is nucleated in the early stages, and it has bluish cytoplasm. The lead apparently concentrates that bluish part of the cytoplasm and breaks it up into smaller masses, and those break into still smaller ones, and finally we have the last stage, these cells with very fine bluish granules. Those granules represent the original cytoplasm which is not differentiated into hemoglobin, but instead has been precipitated in granular form by the lead. The so-called reticulocytes which we study in pernicious anemia are of the same type. The difference is that the reticulation is precipitated by the dye we use on the fresh corpuscles. Thus, reticulation and basic stippling represent the same thing except that the reticulation is seen in normal regeneration, and stippling only in toxic regeneration.

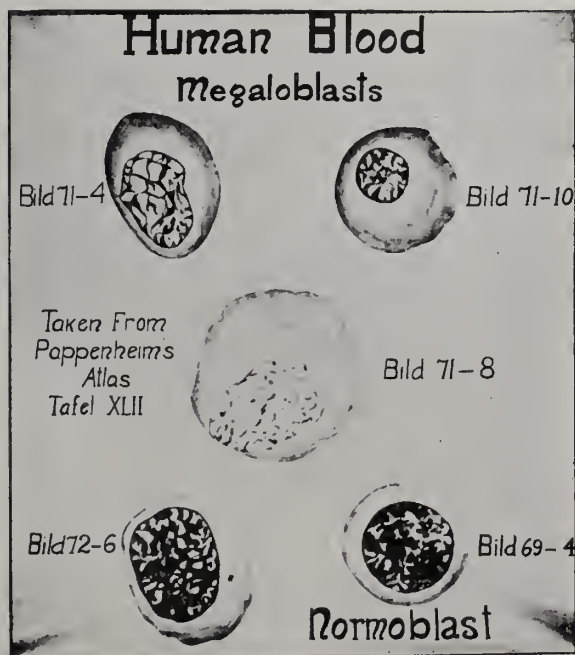


Fig. 19. Distinction between megaloblasts and normoblasts. (After Pappenheim.)

Figure 19 is shown to illustrate the difference between the megaloblast and normoblast. There is much misunderstanding concerning these cell types. We are getting information from Sabin of the Rockefeller Institute and from observers in various parts of the country indicating that there is no difference. Actually the two series are quite different. The megaloblast passes through its own special life history, and the normoblast goes

through its particular series of changes. You can see here, especially by comparison of the nuclear pattern of these cells, that the normoblast is something quite different from the megaloblast. These happen to be from pernicious anemia. They have a great deal of hemoglobin; still they have a fine structure in the nucleus. It becomes a little coarser, and then still coarser, until finally the nucleus disappears. The nuclear pattern of the normoblast is quite different.

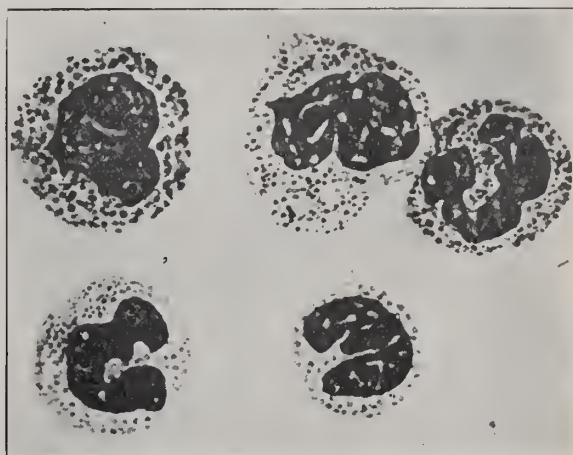


Fig. 20. Toxic neutrophils and "shift to the left" as seen in case of pneumonia.

The cells in figure 20 are the so-called toxic neutrophils that we can find in almost any type of infection, particularly acute infections. Pneumonia is a very good example. Frequently you can get a fairly good idea of the prognosis by studying the number of those cells and the toxic changes and also noting the so-called shift to the left; that is, simplification of the nucleus, which may be entirely pathologic and secondary and have nothing whatever to do with young cells.

The toxic neutrophil is quite different from the next one I want to show, which is the one found in pernicious anemia.

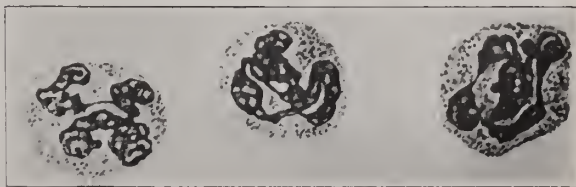


Fig. 21. The specific and characteristic neutrophils from untreated case of pernicious anemia.

In figure 21 are the cells which have been called the pernicious anemia neutrophils. I am sometimes given credit for them because I have talked

a good deal about them, but actually they were discovered many years ago by Naegeli and Arneth. You can find complete descriptions of them in their books, so I deserve no credit for them. I think the cell is one which everybody should know about, because it facilitates the diagnosis of pernicious anemia. In most cases that have not been on liver treatment, about five minutes' examination of the neutrophils of the blood will tell you whether the case is pernicious anemia or not. Those of us who are familiar with these cells, if a case is put up to us and we are asked to determine whether it is pernicious anemia or not, look at the neutrophils and pay little attention to the rest of the blood picture.

Because that cell is so important, maybe you will forgive me if I spend half a minute in describing it. In the first place, the cell must be large, quite a bit larger than the normal neutrophil. Usually it is larger than those toxic neutrophils which were shown in figure 20. The granulation is very conspicuous. Each granule is very distinct and very large, and with the Wright's stain it stains very pink. The granules are all about the same size and are very evenly distributed through the cells. Then, the nucleus is extremely characteristic. You notice that the lobes are not rounded but they are elongated, and they are connected by very much elongated strands, as you see in figure 21. Instead of having round lobes, we have elongated ones. Then tend to fill up much of the cell.

Another very good example is cell 1 in figure 21. This is not a rounded lobe; the nucleus is twisted. It goes under and out. You really must have all of those conditions present before you are justified in giving a diagnosis of pernicious anemia on the blood alone: large cell, very distinct granules, and this very characteristic type of nucleus. It is quite different from the toxic neutrophil.

In addition to these pernicious neutrophils you might find some toxic neutrophils, especially in a case of pernicious anemia that has infection or some other disease present at the same time.

When you see things lined up in this way, and if you can become familiar with a few types of cells, and if you can get hold of some of the good books, like Naegeli's book, "Clinical Diagnosis of the Blood" (it is in German), or Pappenheim's "Atlas of Blood Cells," and become familiar with a few types of cells, particularly with the changes in the lymphocytes, so that you can note the difference between a young lymphocyte and one whose function is altered, you will find that after learning to use the Wright's stain, you can use blood studies very effectively in your own practice.

INDICATIONS FOR SPLENECTOMY*

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Burlington

The operation of splenectomy is a procedure surrounded with many interesting problems, for the spleen is still an organ of much contradiction and mystery. It is only one of a large group of tissues performing similar functions and this no doubt explains why its removal produces very little or no change in the functions of the body. In fact the spleen is of far greater importance pathologically than it is physiologically.

Splenectomy belongs to the group of modern operative procedures and therefore has attracted a great deal of attention within the past twenty-five years, especially in its use for certain types of anemia and blood dyscrasias. The operation has already been established on a firm basis as the proper course of treatment in some of our more common diseases. There are today, however, many practitioners of medicine who are unfamiliar with the remarkable advances made, and the results obtained in this particular branch of surgery.

It is rather difficult to account for the fact that the indications for splenectomy and the knowledge of the results obtained have not been more widely and clearly brought to the attention of our profession. No doubt one large factor is that few surgeons personally have had large enough series of cases of diseases benefited by splenectomy, to be able to form any definite conclusions of their own. Sufficient clinical experience is now at hand to demonstrate beyond any doubt that in a number of diseases, which would otherwise prove fatal, splenectomy will effect a cure. Early statistics of splenectomies showed a high death rate of 25 to 35 per cent. Better technic, earlier operation, a more careful choice of cases and better preoperative preparation have brought the mortality rate of splenectomy in the present days of surgery down to somewhere between 5 and 10 per cent.

The conditions requiring splenectomy fall into two groups: (1) anomalies of position, injuries, abscesses, cysts, new growths, and specific infections such as syphilis, tuberculosis and malaria; (2) diseases of the blood and of the reticulo-endothelial system in which the spleen, being enlarged, appears to exert a controlling or causative influence. I do not propose in this paper to discuss the indications for splenectomy in the former group of cases, but shall limit myself to its use in splenomegaly associated with definite blood

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

changes, and endeavor to define the indications for its successful employment, in such cases.

The decisive factor in the decision for or against splenectomy in any given case will be the complete blood picture, the stage of the disease and the condition of the patient, rather than the splenic enlargement. For example, if the case is one of marked anemia, with a greatly enlarged spleen, and the bone marrow is not able to produce new cells for the circulation, then no result would be obtained by splenectomy. On the other hand, in a case of purpura where the blood platelets are much diminished or absent, the removal of even a smaller than normal spleen may lead to a miraculous recovery. The importance the complete blood picture has in the determination of whether or not splenectomy in any given case is a rational and will in all probability be a successful procedure should therefore be emphasized strongly.

The introduction of the method of vital staining of blood smears and the counting of reticulated corpuscles or the so-called reticulocytes have become of great importance in the selection of cases. A reticulocyte is a red corpuscle containing substantia-granulofilamentosa and its presence in a corpuscle is considered to be a sign that the corpuscle is of recent formation. The occurrence of large numbers of reticulated cells is indicative of active red corpuscle formation. Therefore if the blood smear, by the so-called vital staining method, shows large numbers of reticulocytes or young red cells in the presence of well marked anemia accompanied by splenomegaly, one must feel that the bone marrow is working very hard to try and offset the excessive red cell destruction, and it is very likely that the spleen is playing a very prominent part. If on the other hand, we have a progressive anemia, with a very low reticulocyte count, we are dealing with an aplastic bone marrow and there would very probably be no improvement in the patient's condition from a splenectomy. In addition to the reticulocyte count the blood platelet count is of great importance, for wherever we find a low platelet count, splenectomy offers great probability of improvement or cure in the condition being treated.

There are three conditions in which splenectomy gives great improvement and often what amounts clinically to a cure, namely, splenic anemia, hemolytic jaundice and chronic purpura hemorrhagica.

The term *splenic anemia* in itself indicates a syndrome of many causes and not a clinical entity. We have as yet no proof that there is in the spleen any infectious or toxic process that produces the pathologic changes. There is, however, very ample clinical proof in a large number of

cases, that splenectomy is followed by a marked improvement of the blood picture and the clinical state of the patient. Therefore splenectomy, wherever possible, is the only logical treatment to be employed. It is important also that the operation should be undertaken before the disease has passed beyond the first stage.

Splenectomy in the first stage is not only accompanied by a lower mortality, but in the majority of cases has caused great and lasting improvement in symptoms, often amounting to a complete cure. Even when the operation is done during the terminal stages in the presence of ascites and shrinkage of the liver, splenectomy, if combined with omentopexy, may produce a speedy return to a fair degree of health and give a prolongation of life and freedom from symptoms for several years. The operative death rate in splenic anemia depends largely on the cases selected for operation. A mortality of 10 per cent should be expected if cases including all stages are subjected to operation and then it will be found that for the most part this 10 per cent will represent those cases in the terminal stages of the disease when the liver as well as the spleen is involved. However, these bad risks, who are in the terminal stage, will show a large percentage of recoveries, and will live for years. It is not fair to any of these patients to refuse them operation on the ground that it is too late. As in all anemias, transfusions may be counted upon to better the condition temporarily and better the operative risk. Studies of the hepatic function before operation will also eliminate some of the operative failures. At best in this group of cases it is difficult to give the ultimate prognosis with any degree of assuredness. We can promise the patient great improvement in general health and comfort, but we cannot promise complete cure. Patients apparently showing the syndrome of splenic anemia, who are not improved by splenectomy, are usually those in whom some chronic recurring infectious process has been overlooked.

Hemolytic jaundice is the disease in which splenectomy has had its greatest success. Two types of this disease are usually described, the familial or congenital, and the acquired. Sometimes it is difficult to classify the particular individual case on hand, but from a practical point of view it is of no great significance, for we know that splenectomy is of equal efficacy in both types. The acquired form is the more serious, however, and when diagnosed, one must search for and remove when possible any underlying causes, such as malaria, tuberculosis, syphilis or dysentery. It is important to remember that more than half the patients with hemolytic jaundice, have gall-stones.

They are doubtless a later development in the disease and should not be allowed to mask the symptoms of the real disease. In hemolytic jaundice we see large numbers of reticulated corpuscles in the blood, showing little or no impairment of the regenerative power of the bone marrow and indicating an active production of red blood cells, which are being destroyed in great numbers. The finding of so many reticulocytes in the blood indicates that removal of the spleen will allow these young red cells to reach maturity. Splenectomy is evidently clearly indicated in these cases. The only contra-indication for splenectomy is that it should not be performed during a period of exacerbation. It is sufficient to say that in hemolytic jaundice removal of the spleen cuts short the disease as though by magic, the patient perhaps jaundiced from birth, becomes white in a few days, the anemia disappears quickly and general good health is restored and maintained.

Chronic purpura hemorrhagica is the latest addition to the list of diseases successfully treated by excision of the spleen. The striking feature of this disease is a marked reduction or absence of blood platelets. It is known that removal of the spleen always leads to an increase in the blood platelet count, therefore splenectomy seemed a rational line of treatment and the results obtained have been very striking. Once purpura hemorrhagica is diagnosed, one must be very sure the disease is present in a chronic recurrent form and not in the acute fulminating form. The chronic type is cured by splenectomy promptly, while the acute form is seldom influenced favorably by it. The acute form has a very high operative mortality rate. The results obtained no doubt depend on whether the spleen alone is mostly responsible for the destruction of the blood platelets, or the entire reticulo-endothelial system. It is not essential to have a palpable or enlarged spleen as an indication for splenectomy in chronic purpura; the spleen may be not at all enlarged or in some cases be even less than normal in size.

Clinically *Gaucher's disease*, although resembling splenic anemia, is apparently much more serious and runs a rapidly fatal course. The diagnosis of this type of splenomegalia is made with certainty only by the pathologist since the true and distinguishing histologic characteristics cannot be recognized until after splenectomy. It is still advisable to give patients with diagnoses of Gaucher's disease the benefit of the operation in the hope that the condition is really splenic anemia. All treatment in true Gaucher's disease has been uniformly disappointing on account of the widespread pathologic changes. The disease is known to exist independently in the liver, bone marrow and lymph

nodes. Splenectomy may be indicated to relieve pressure from the massive size of the spleen and thus make the patient more comfortable, but it seldom alters the course of the disease.

Splenectomy in *myelogenous leukemia* should be restricted to those cases in which the disease has been present for not more than two years and probably should not be urged upon any patient. If the previous history has been short, the anemia not marked, and there is no evidence of acute leukemia, one can expect in some cases after splenectomy better general health, less anemia, lower leukocyte count than before operation and less likelihood of the recurrences of the anemia so common in this disease. X-ray and radium should be used to bring the leukocyte count down to somewhere between 25,000 and 40,000 before operation. After operation these same agents should again be employed whenever the leukocyte count goes above 75,000. Benzol often seems to work better than either radium or the x-ray.

In *pernicious anemia* splenectomy never produces a cure and the failures to secure prolonged improvement have brought the operation for this condition into disrepute. There is no clear indication for splenectomy in pernicious anemia and studies of the pathology in the spleens removed in this disease show no direct connection between the spleen and pernicious anemia. Splenectomy should never be considered while pernicious anemia is in a very active state or crisis, and should not be done in a case which does not receive striking benefits from a transfusion. In the aged and the advanced cases the benefit derived from splenectomy would never be worth the risk involved, but in patients with the more chronic types, who are otherwise good subjects for operation, and are of not too advanced age, the operation might be considered. Dietary treatments are, of course, giving us very good results at the present time in this group of cases and should be used additionally in any case in which splenectomy would be considered. It has been of great interest to me to find that in some cases where the blood picture in pernicious anemia can be brought back to normal and practically held at that level, the cord changes will develop and continue to progress.

In the light of our present clinical experience a spleen that is chronically enlarged must be regarded as a menace to the health of the patient and it rests with the physician to show why it should not be removed. Before advising splenectomy the physician must be positively satisfied that a cure by medical measures cannot be expected and that the prospects of cure by removal of the spleen are sufficiently good to make the operation worth the immediate risk to the patient. The spleen should

never be removed for a chronic condition when the patient is on the down-grade. The technical difficulties of splenectomy do not affect the mortality rate so much as does the condition of the blood and the liver. The determination of the advisability of splenectomy in any individual case, after a satisfactory diagnosis has been reached, should be governed by the results obtained in the estimation of the function of the liver and the absence of any chronic recurring infection.

Discussion

Dr. S. D. Martin, Carroll: The essayist is surely to be complimented upon the thoroughness of the presentation of his subject and his brief and orderly manner. It seems to me that he has given us in a very few words a delightful resumé of the indications for splenectomy in the three conditions, splenic anemia, hemolytic jaundice and chronic purpura hemorrhagica. Of the three, possibly the first, splenic anemia, offers a chance of some difference of opinion, but at this time and until more research has been instituted, the consensus of most authorities is along the lines advanced by the essayist.

In regard to chronic purpura hemorrhagica, allow me to quote from the March 30, 1932, issue of the "Staff Meetings of the Mayo Clinic." W. C. MacCarty, M.D., writes: "In this series of cases, twenty spleens were removed surgically because of hemorrhagic purpura. Rarely has there been anything so spectacular as the good results of splenectomy in this group. I have not been able to distinguish this type of spleen from any normal spleen. They are rarely much larger than normal. Giffin has stated that they are characterized clinically by chronic recurrent types of purpura hemorrhagica with low platelet count, non-retractile clot, long bleeding time and a positive tourniquet or capillary resistant test. Bleeding in most cases was from the nose, gums and uterus."

In these times of greatly increased frequency of automobile accidents it seems that a word about traumatic injury of the spleen would not be amiss, especially to the great majority of us—the general practitioners who in practically every case of injury see the patient first and upon whom rests the responsibility for a diagnosis and the institution of prompt surgical interference. Without treatment the mortality in subcutaneous injuries to the spleen is very high, over 90 per cent, according to Berger. Hemorrhage is the usual cause of death. Lewerenz found that 85 per cent of 135 patients without operative interference died within the first twenty-four hours from hemorrhage. Among 168 fatal cases reported by Berger, 145 died the first day; in 90 per cent death was due to hemorrhage, in 10 per cent to sepsis. With operation the mortality is much lower. In a large series, 298 cases, reviewed by Michelson, the mortality with all forms of operation was 33.2 per cent.

Unfortunately there are no absolute signs of traumatic subcutaneous splenic injury. In general the symptoms are those of intra-abdominal trauma and

hemorrhage. The picture varies with the amount of hemorrhage and the character and extent of the injury. Between the two extremes, the simple contusions without hemorrhage, and massive and extensive rupture of the spleen with terrific hemorrhage, fall most of the cases of spleen injury. These cases present the usual trio of symptoms of intra-abdominal injury, trauma, shock and hemorrhage. The period of shock following trauma is sometimes of short duration and may clear up before the symptoms of hemorrhage are clear cut. When the bleeding immediately follows the trauma and continues and increases, the symptoms of shock merge with those of hemorrhage. In some cases there is a period following the shock in which the patient seems to improve and although he complains of some abdominal pain and shows some signs of abdominal injury, he may attempt to resume his work.

Whenever there is a history of trauma across the lower chest or upper abdomen, followed by rapid, thready pulse, low blood pressure, subnormal temperature, followed by a rise above normal, blanching of the mucous membranes, dullness in one or both flanks, nausea or vomiting, abdominal pain, possibly more marked in the left hypochondrium, sometimes accompanied by pain in the left shoulder, and rigidity of the recti muscles, make your diagnosis early and remember that 85 per cent of the patients die within twenty-four hours without operation and also that the earlier the hemorrhage is controlled the better the chances of recovery.

THE SIGNIFICANCE OF BLOOD FINDINGS IN SURGICAL CONDITIONS*

CHALMERS A. HILL, M.D., Council Bluffs

The annual death rate from appendicitis alone is equal to the combined death rate from salpingitis, pelvic abscess, surgical diseases of the thyroid, spleen and pancreas, from cholecystitis and ectopic pregnancy. Data from the Bureau of Vital Statistics show that from 1909 to 1922 the mortality rate from appendicitis increased almost 31 per cent. This statement was taken from a paper by C. Alexander Hellwig in the Journal of the Kansas Medical Society, October, 1928.¹

The late Dr. Donald Macrae frequently made the statement that "no patient should die from appendicitis." How can these statements be reconciled? There are several factors entering into the cause of the high mortality in appendicitis. The one we will discuss today is, "What information can we obtain from an examination of the blood that will aid in the diagnosis and suggest the proper treatment for a patient suffering from an abdominal condition suggestive of appendicitis?"

We have all had the experience of finding upon operation, an appendix acutely inflamed and per-

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

haps gangrenous, when the total white cell count was between 10,000 and 13,000. The white cell count alone is not a true index of the severity of the infection. If we consider the differential count, the information obtained is more helpful. It is my opinion that there are very few cases, when a differential count is made in the first six to twelve hours of an acute attack, that will not show an increase of polymorphonuclears of from 75 to 85 per cent. There are undoubtedly cases of an extremely fulminating character in which the body does not have the opportunity to build up a defense, where this increase will not be found. In a patient who is seen in the second or third day of an attack, there are so many conflicting influences that the blood factor will not be of much help in arriving at a diagnosis or in deciding the proper course of treatment.

If we consider the white cell and differential blood count as an aid in the differential diagnosis of the various acute abdominal conditions caused by coccogenous infection, we will find that there is not a sufficient difference in the findings to point definitely to a diagnosis; for example, the diagnosis between acute cholecystitis and acute appendicitis or acute appendicitis and ruptured tubal pregnancy.

If the foregoing statements are correct, and I believe they are substantially so, then we are not justified in placing the responsibility of making the diagnosis or determining the time for operation in a suspected case of appendicitis, on the laboratory data, but must make the diagnosis and determine the time of operation from the history and physical findings. I am certain if we would follow this practice that the mortality in appendicitis would decrease to a considerable extent.

The differential count is of distinct help in making the differentiation between coccogenous and bacillary infections such as typhoid and uncomplicated tuberculous infection. It is also of real value if the diagnosis is one of acute infection as opposed to lead poisoning or the gastric crisis of tabes.

In 1904, Joseph Arneth divided the polymorphonuclear leukocytes into five classes according to the number of divisions or lobules of the nucleus. On this basis he attempted to draw certain conclusions of diagnostic importance. Arneth's observation promoted great interest throughout the scientific world and it was recognized that his procedure was of definite value. It did not come into popular laboratory use because of its complexity and the length of time required to do the count.

In 1920, Victor Schilling, after a thorough application of Arneth's method, published a modification of his classification. The Schilling count

can be made in from five to fifteen minutes after one has become familiar with the classification. In some hospitals and clinics where the method has been in use, it has been found to be of considerable value. Basing my opinion on these reports and from the literature which has come to my notice, I believe the count to be of real value. I have had no personal experience with the method and hope that in the discussion someone who is familiar with the procedure will give us some definite information.

The erythrocyte sedimentation reaction is another procedure with which I am not familiar but in the opinion of many men who have made a careful study of the test it is of value in the differential diagnosis of certain diseases, such as ulcer and cancer of the stomach, acute appendicitis and acute pelvic disease or acute infection of the kidney as opposed to acute appendicitis. The test is also helpful in determining the proper time for operation. This is especially true in acute pelvic infection. Here again I would be pleased if in the discussion the value of this test would be brought out.

When we come to consider the complete blood count, I will quote from an article by A. K. Gordon in the *Postgraduate Medical Journal* of August, 1929, in which he says in his discussion of the anemias: "Here we have to distinguish between the primary diseases, of which pernicious anemia is the most important, and the secondary anemias, the latter being due either to deficiency of hemoglobin, hemorrhage or bacterial infection. In regard to the latter, it is worth noting that the bacterial infection often escapes notice owing to the blood not having been examined. If it is present and the signs are found in the white cell series, the administration of iron alone is almost valueless, and combating of the systemic infections by vaccine therapy is indicated. With regard to pernicious anemia, the essential features in the blood are a lowered erythrocyte count, a color index of 1.0 or over, an increase in the average size of the red cells, with the presence of embryonic erythroblasts of the type peculiar to this disease. These cells are easily recognized by an experienced observer and are similar to those found in the islet of Pander on the walls of the yolk sac of the embryo, and in fetal liver. They are quite distinct from the normoblasts and macronormoblasts present in the bone marrow, though these latter may be and often are present in pernicious anemia. Leukopenia is markedly present, with a relative lymphocytosis. In secondary anemia, on the other hand, while the total red cell count may be diminished, and always is in severe cases, especially those due to hemorrhage, normo-

blasts and macronormoblasts may be present, but the embryonic erythroblasts are absent. The color index is lowered to 0.6 or less and the average size of the red cells is not increased.

"Carcinoma generally gives rise to the blood picture of septic infection. Inequality in size and shape of the red cells is found both in pernicious anemia and severe cases of secondary anemia due to hemorrhage or sepsis. The rare condition known as aplastic anemia should be mentioned here. The features are a marked diminution in the number of all the cells, with absence of primitive forms, the differential count usually showing no histologic abnormality. It is sometimes seen as the terminal stage of sepsis or hemorrhage, but it is more often a primary disease, the exact causation of which is at present unknown. It is sometimes due to excessive doses of x-ray or radium.

"*The leukemic group.* Here there is no difficulty in diagnosis of the blood to be examined. There is a large increase in the total and relative number of the granular cells in the splenomedullary type, and of the lymphocytes in the lymphatic variety, with a shift toward primitive forms, which becomes more prominent as the disease progresses. This is often so marked that in the terminal stage it is sometimes difficult to say whether the disease was originally myeloid or lymphatic, the blood picture consisting almost entirely of ancestors of both forms.

"*The purpura group.* Here we have hemorrhages into or underneath the skin, with bleeding from mucous membranes or internal organs. The two main causes of this are platelet deficiency and bacterial infection. In the former group (essential thrombocytopenia hemorrhagica) the platelets are reduced to 50,000 per c.m. or may even be practically absent so that only two or three are seen on a whole slide. The importance of this observation lies in the fact that splenectomy is usually the only successful treatment, whereas, in bacterial infection, the operation is almost always fatal and is contra-indicated."²

If the blood examination shows that the secondary anemia is in all probability due to infection then we should make diligent search for the focus and when possible remove the same and institute whatever treatment is indicated to improve the condition of the blood before any major surgical procedure is attempted. Should the condition of the blood be caused by continuous bleeding, however slight, an attempt should be made to control this bleeding by appropriate measures, such as rest in bed, blood transfusion, diet, and whatever medicinal treatment is indicated. Unless a real emergency exists, no major surgery

should be attempted until an examination of the blood shows the loss to be checked and if practical, not until a definite improvement in the condition of the blood is shown.

Prior to the discovery and introduction of insulin, the diabetic patient was a very poor surgical risk. Ernest B. Bradley, in the *Kentucky Medical Journal* of February, 1930, makes the statement that a recent study of twenty different series of surgical patients suffering from diabetes, prior to the use of insulin, showed a mortality of from 5 to 80 per cent. Since the introduction of insulin this mortality rate has steadily decreased until at the present time rates as low as 3 per cent are shown in some series.³

In order to obtain the best results it is essential for the surgeon to have the cooperation of a physician who is skilled in the use of insulin and who is familiar with blood chemistry. Granted that this close teamwork is maintained, the results obtained both in general surgical conditions such as appendicitis, gall-stones, disease of the thyroid, and prostatectomy and malignant diseases, as well as those conditions peculiar to diabetes, gangrene, furunculosis and so forth, should be good. In all cases where infection is present, preoperative blood culture should be done in order that the responsibility for septicemia should not be attached to the operator. The blood culture will help in the prognosis.

There are a number of surgical conditions in which one can rely on a careful history and physical examination to arrive at a diagnosis and decide on a proper course of treatment. In disease of the urinary tract this is not true and the surgeon who persists in this practice is "riding for a fall."

In addition to the renal function tests no major surgical procedure should be attempted until an examination of the blood shows the urea nitrogen or non-protein nitrogen to be within normal limits or at least approaching normal. It is certainly bad practice to operate if the examination shows a continued increase in one or both. The truth of this statement can be well illustrated in a case of prostatic hypertrophy with urinary retention. The operation for the removal of the prostate is not difficult, and if the preparatory treatment has been carried out with due regard to the blood chemistry findings the mortality rate is satisfactory. This was not true before these examinations became routine. The postoperative treatment can and should be checked with the same care. If these procedures are faithfully carried out, surgery on the urinary tract will be much more satisfactory in the end results.

Another condition in which the blood chem-

istry findings are of great importance is ileus. Whether the ileus is paralytic or mechanical in origin, the blood findings are similar and very characteristic. A condition of alkalosis develops as shown by a marked decrease in the plasma chlorids, while the blood nitrogen and carbon dioxide combining power are markedly increased. If in a suspected case of ileus careful blood chemistry examinations are made, an earlier diagnosis will be reached and the proper treatment, whether medical or surgical, can be instituted and much better results obtained. Whatever opinion we may hold as to the cause of shock, the end result is essentially a condition of acidosis. The outstanding change in the blood is a decrease in the alkali reserve with resultant decrease in the carbon dioxide combining power of the blood plasma. The blood findings will be helpful in indicating the proper treatment.

We have all had the experience in surgery of the biliary passages and gall-bladder where the operation was done without any special difficulty and we had reason to believe convalescence would be satisfactory, but on the contrary the patient did not do well. We should remember that in diseases of the biliary passages, especially where the disease is of long standing, there is likely to be a disturbance of the liver itself. With these facts in mind, Rowntree devised a test in which by injecting certain of the phthaleins into the blood and determining the length of time required for the elimination of the drug from the blood, he was able to estimate to what extent the liver function was impaired. In 1922, Rosenthal modified the test in certain particulars, but the underlying principles are the same.

In cases of biliary obstruction, valuable information can be obtained by a determination of the bilirubin content of the blood. By this means we can be warned of so-called "latent jaundice" before there is any evidence in the skin or conjunctiva. If use was made of these tests in determining the type of operation to be done, and as a guide to the time for operation, I am sure our results would be satisfactory in a larger percentage of cases.

It is apparently the consensus of opinion that the coagulation time of the blood, taken before operation, is not of much value as an index as to what may happen during or following the operation, and we can only be guided by the general condition of the patient and the information obtained by the liver function test and the amount of bile pigment found in the blood. I feel we should delay operation if possible in the presence of acute and progressive jaundice until such a time as the jaundice has become stationary or

shows signs of retrogression. If this practice is followed, we will have less troublesome bleeding during the operation and fewer instances where postoperative hemorrhage will prove serious.

In the good old days when men were men, and the physician depended on what he could see, hear, feel and sometimes smell, to make a diagnosis, we would occasionally find, in the treatment of fractures, upon removing the cast after a period of six to eight weeks, that the alignment was good, the apposition perfect but that the union was nil. In these cases we learned empirically that after a course of potassium iodid lasting four to six weeks, the union would be much better or perhaps complete. After the Wassermann test came into general use, we knew why the fracture had failed to unite and why it did unite after a course of potassium iodid. Now it would be considered much better practice in a case of fracture to make the Wassermann test first and apply the anti-syphilitic treatment if the test were positive rather than wait eight weeks to see if the fracture were going to unite.

Occasionally after an operation on a gall-bladder, we have wondered whether the pathology found at the time of operation was sufficient to account for the symptoms of which the patient had complained. However, if we were optimistically inclined, we would feel that the condition of the patient would be improved and that a cure had been effected, especially if at the time of operation we had removed an appendix which was suspicious in appearance. If after a year or more, during which time the bill had not been paid, the patient one day presented herself at your office, bringing her husband with her, and informed you that she was not going to pay the bill "because the operation hadn't done her no good and that some time after you had operated her symptoms returned and she consulted Dr. Jones who took some blood from her arm and gave her medicine which had apparently effected a cure and she had been free from symptoms for from six to nine months, perhaps longer," you would be driven to the conclusion that it would have been wiser to have had a Wassermann test made before the operation and if the first test was negative to have repeated the Wassermann once or twice rather than remove the gall-bladder from a patient who was suffering from the gastric crisis of tabes.

In this paper there has been no attempt to enter into an exhaustive discussion of serology or blood chemistry, but I have tried to call to your attention a few findings in the blood which would be helpful in making a correct diagnosis, and to suggest a proper treatment in surgical conditions.

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Discussion on papers of Drs. Eggleston and Hill

Dr. Hal Downey, Minneapolis: There were quite a few things brought up here that were very interesting. It was very interesting to me to hear pediatricians and surgeons talk about blood. I have been interested in blood more from a morphologic angle. That has gradually spread until finally I have got into these things which have some clinical application.

Hearing Dr. Hill's paper reminded me that a number of years ago the German Surgical Society devoted a two-day session to the consideration of hematology as related to surgery, which shows that the interest in the subject and the realization of its practical application is spreading.

Dr. Eggleston mentioned many very important things. His classification of anemias certainly gave many things of interest. I would like to say a word about the hemolytic jaundice, because I think some mistakes are made in taking out the spleen in conditions which are really toxic, where splenectomy is not indicated. I do not know much about the acquired hemolytic jaundice. I never had a case for observation that we interpreted in that way. We have had several cases of the congenital hereditary type. There you get a very definite and specific blood picture. You have a very definite type of red corpuscle; it is a very small cell, a so-called microcyte, and it is spherical. Instead of being a biconcave disk, it is round, and it looks like a piece of shot; it is very dark. If you have a case like that, one squint through the microscope is all that you need for diagnosis. Of course, resistant tests may be of some importance.

There are other conditions in which you might get microcytes, but they are of a different character. They are usually pale and biconcave and have the same form as a normal corpuscle, or they might be irregular in shape. These microcytes which you get in the hereditary type of hemolytic jaundice are a type of cell which you do not see in any other condition.

Then the purpura hemorrhagica. I have seen several mistakes made there. As far as I know, there is only one type which is really benefited to any extent by splenectomy and that is the essential thrombocytopenia or Verhoeff's disease. The only thing you will find in the blood is a reduction in the number of platelets. Morphologically the blood shows very little. It looks normal. You do not find toxic neutrophils and things of that sort. The main thing is this reduction in platelets. The splenectomy has, of course, marvelous effect on that type of case.

There are others in which clinically you might be dealing with the same thing, but if you examined the blood smear you would find toxic neutrophils, and you might find a leukocytosis. That, to me, in-

dicates that the hemorrhagic tendency is due to capillary difficulties; it has little to do with the reduction of platelets. You might get a reduction of platelets there, also, as a result of the action of the toxins on the bone marrow. That sort of case usually does not benefit by splenectomy. I would not be willing to say that it never does.

About a year ago there was a case in which there was a purpura hemorrhagica of this toxic type. The patient was getting extremely anemic, and he was bleeding very profusely. It was obvious that splenectomy was not indicated, and still the physician in charge said, What shall we do? This patient is going to go out anyway. We will transfuse him."

That was tried. It had a temporary effect but not a permanent effect. Finally a splenectomy was performed. He went to pieces very quickly after that. It was obvious that we were dealing with a condition quite different from this so-called Verhoeff's disease.

Dr. Eggleston pointed out in a very good way why it is that we do not expect any benefit from splenectomy in Gaucher's disease. I had the pleasure of working over several cases of Gaucher's disease with Dr. Mendelbaum at Mount Sinai Hospital, who, together with Brill, has done more on Gaucher's disease in this country than has anybody else. The rest of us do not pick up cases of Gaucher's disease, probably because we cannot diagnosis it. It is around, but we do not do splenic punctures, and the clinical features are not recognized. At Mount Sinai they are skillful in that procedure and pick out a good many cases. The difficulty there is that the disease is not merely a splenic affair alone. The liver and the bone marrow are affected and also the deep lymph nodes. Therefore, taking out the spleen is not going to do any permanent good. Usually the patients do not die from the Gaucher's disease but they die from some intercurrent infection.

I have had a little experience with the so-called Schilling count, and I am giving less and less attention to total counts and ordinary differential counts. In the cases I mentioned in my paper, two of them had exactly the same total count, the same differential count, yet one was a benign affair and the other was an acute leukemia.

At the same time we were studying those two cases we happened to have a case of mouth infection which also showed a total count of 3,000 and 85 per cent lymphocytes. The lymphocytes were all normal cells. That was not a case of the so-called mononucleosis or leukemia. We had three different conditions, yet the ordinary counts were exactly the same.

You should look into the qualitative picture, study the character of the cells, and particularly combine that with the Schilling count and pay attention to such things as the shift to the left, that is, the simplification of the nucleus, and then determine whether that is due to the presence of young cells, or whether it is due to secondary pathologic alteration. Schilling did not pay much attention to that at first, but in his later writings he has said that you must

show the differential between the lobules of the nuclei and the simple type of nucleus which is due to immaturity.

If the thing is due to immaturity and you have many cells in Schilling's first group, his M-group, the chances are you might be dealing with leukemia. His M-group has to be subdivided further into myeloblasts, leukoblasts and myelocytes. Those three things are really grouped together in the Schilling count, but they should be kept distinct, because you might have a high percentage of myelocytes and still the case might be benign. However, if you have cells that are still younger than the myelocytes, in most cases you are dealing with a leukemia. Leukemias were mentioned in these papers.

I tried to make clear with my lantern slides that there are many different kinds of leukemia. We have the ordinary types, the chronic myelogenous, the chronic lymphatic, and we have the acute forms in both of those series. Then we have leukemias involving monocytes, and leukemias involving the platelet-forming apparatus. We have leukemias that involve the red cells, and then leukemias of the connective tissue. Finally, we have a mixed leukemia, which I forgot to mention. Both the lymphatic apparatus and the myeloid apparatus are involved at the same time. In the blood picture you can trace all the intermediate stages. That, of course, is of great theoretic interest in that it shows that you might have one common stem cell under these peculiar conditions which gives rise to these two lines of cells which ordinarily are separate. It is important to remember that the separation, under most conditions, means that the lymphocyte does not go back to a lymphoblast, and that in turn helps to distinguish between leukemic and non-leukemic on the lymphatic side.

Dr. Charles T. Maxwell, Sioux City: With regard to Dr. Hill's paper on the question of non-union of fractures, I think we all should have more Wassermann's on all of our cases than perhaps any of us do. As to the factor of syphilis in non-union, however, I feel that is not proved.

I had the pleasure of attending a meeting of the College of Surgeons in Chicago two years ago and hearing a discussion by Drs. Scudder, Cotton and Magnuson. The consensus was that syphilis was not demonstrated to be a cause of non-union in fractures.

One test that might be mentioned for what it is worth, in the question on non-union, is the product of the calcium and phosphorus content of the blood, which should approximate 35; that is, the milligrams per 100 c. c. of calcium times the milligrams of phosphorus should approximate 35. This also is a suggestion and has not been proved.

Dr. F. L. Nelson, Ottumwa. With reference to Dr. Eggleston's very scientific paper, I believe there is no procedure in surgery that is so uniformly disappointing, outside of the traumas and the possible exception of the purpuras, as splenectomy. When you consider your immediate mortality, your end-

results will not be very much different whether you do or do not perform a splenectomy.

There is just one point on Dr. Hill's very splendid paper, with reference to the blood count in acute surgery. We all know that we have many cases of gangrenous appendices that will show a white blood count of probably 6,000 and polymorphonuclears of probably 50 or 60. The same type of case, that is seemingly the same, with the same pulse and little or no temperature, will show 90 polymorphonuclears and 15,000 or 18,000 white cells.

The point I would like to make is that the blood picture is only important with the history and, still more important, with the trained palpating finger which alone will determine intelligently the underlying pathology.

Dr. E. H. Boyer, Clinton: There has been a good deal of discussion on this floor today with regard to the application of laboratory work to clinical medicine, but nobody, until our last commentator spoke, has said anything about the limitations of laboratory work.

Laboratory people do not want somebody else to say there are limitations, but inasmuch as I am making my living at it, I think I can criticize that side of it without hurting my own feelings.

Blood counts are all right. Other laboratory procedures are all right, when they are indicated. Unfortunately, many laboratories, particularly hospital laboratories, are called upon time and time again to perform various laboratory procedures for which there is no definite, legitimate indication.

The last doctor who spoke said that when there was a case of acute appendicitis, for example, train those palpating fingers; learn the history of the patient. That will do you more good in a few minutes than a thousand blood counts could ever possibly hope to do. There is no question about that. I do not mean to decry the ability of the laboratory to be of help, but let the laboratory be of help and not actually make the diagnosis. Of course, there are exceptions to that. There are some cases in which the diagnosis is impossible without the laboratory. But I do not know how many times I have seen the laboratory worker called at night to make a blood count on a patient whose case has already been diagnosed as acute appendicitis, and I have seen that patient in the operating room, under the knife, before the blood count was finished. Clinical experience has taught the man that appendicitis is present. Clinical experience has taught that the sooner that acute appendix is removed, the better for the patient.

The first thing to do, to my way of thinking, is to determine that acute appendicitis or acute some other 'itis' is present. Be reasonably assured that the clinical diagnosis is correct, then go ahead and treat the individual clinically. It makes no difference whether he has 15,000 or 5,000 leukocytes. If he has appendicitis, he has appendicitis, and you want to get the appendix out, regardless of the blood count.

Dr. Hill said he had had no experience with the Schilling count. I have been very much interested in the Schilling count. It put me in mind of the reception always accorded something foreign. If some Count from across the sea comes over here, he is given a big reception. Some man who is worth ten times as much, from our own country, might be ignored here. The Schilling count has been received with a good deal of acclaim, some of which is entirely deserved. The Schilling count is open to the same objection as the total white and differential count, namely, that it is not like a nickel-in-the-slot machine, where you drop in the coin and pull out the diagnosis. It does not work that way.

For example, I have seen a number of patients who presented symptoms of acute abdominal pathology, and whose white, differential, and Schilling counts were practically identical. Appendectomy was performed on some of these patients. Some recovered; some died. Some of the ones not receiving surgery recovered without diagnosis! Again, two people who present the same pathology and who are treated identically, and who pass through the same course of the disease, may present blood counts which vary markedly.

Experiences of that sort make us believe that the Schilling count or any other laboratory procedure has very definite limitations. The reason I came up on the platform at all was to make the plea to every clinician to learn the indications for laboratory work and, when there are indications, call on the laboratory. In order to determine what the indications are, every clinician must take a careful history and must make a careful physical examination. When those two things are done, there will be fewer calls upon the laboratory and, I hope, better work, in turn, from the laboratory.

Dr. W. R. Brock, Sheldon: I should like to ask a question of one of the essayists. I think he referred to an ileus due either to mechanical obstruction or paralysis and suggested making a kidney function test. I would like to ask what is the practical value of this test for kidneys when facing the great emergency and the immediate necessity of handling the ileus or obstruction.

Dr. Hill (closing): I had no intention of throwing any disparagement on the laboratory people. What I meant to say was that we should not expect them to do something they cannot do, and shift the responsibility for something we should do ourselves. I was not finding fault with them at all. I tried to give them all the credit that was due, and I think they are entitled to a lot of credit. There is no disposition on my part to blame them for what they were not supposed to be able to do, but to blame the practitioners, the surgeons, for not doing their own work and getting the laboratories to do something for them.

With reference to the ileus, I did not say to do a liver function test. I urged you to examine the blood to find out whether there was alkalosis or acidosis in the blood, and then treat the condition. If you

got the impression that you should do a liver function test, that was not what I said. It is a matter of examining the blood to see whether there is a condition of acidosis or alkalosis present, and perhaps to direct the proper course of treatment.

Summary by Medical Guest

Dr. Henry L. Ulrich, Minneapolis: I want to comment on the remarks of the gentleman who spoke last on the platform. I agree with him. I think clinical medicine is as much a biologic science as zoölogy or biologic chemistry. It may not be as accurate as biologic chemistry, but it is pretty accurate if one knows the subject. In other words, we should not be ashamed of our clinical data, our clinical methods, but we should stand by them. Of course, I agree with Dr. Hill when he claims that the diagnosis of an acute abdomen should not be made in the laboratory. That is quite correct. I think we ought to feel proud of our clinical methods and stand by them and develop them.

With regard to Dr. Downey's discussion on the variation of leukocytes, this unitarian system which begins with the reticulocyte and then differentiates into numerous types which may go native and then get into the circulation, what are we poor clinicians going to do? We have been using Downey for some years. Every once in a while we use him very hard and get mad at him, because he makes mistakes, too. We let him alone for a while and then go back to him.

We are particularly anxious for his help when it comes to splenectomy, because, as has been mentioned by Dr. Eggleston, there are three types of disease where splenectomies are of value, purpura hemorrhagica, hemolytic jaundice, and Banti's disease, if you want to call it that, but in purpura we lean on Dr. Downey.

He brought out the differentiation which is very easily made by any clinician. When it comes to operation we come back to him to verify our own opinion. There should be no toxic picture in purpura if you want to take out the spleen. If you have a toxic picture you are not dealing with a primary purpura, you are dealing with something else.

It is interesting to know that in hemolytic jaundice nothing happens to the blood after you take out the spleen; it is just the same. The only difference is there is no more jaundice. You have this marked improvement in anemia, with no more hemolysis.

Now about Banti's disease or the splenic anemia, we have come to the conclusion in Minnesota that Banti's disease is nothing but cirrhosis of the spleen which eventually goes on to the liver, and that it is nothing but cirrhosis of the liver which has chronic manifestations in the spleen first. That is our conception of Banti's disease today. We are taking out Banti's spleens before we have jaundice, before the liver is very much involved. If there is jaundice we let it go, because our experience in taking out spleens in those cases has not been very good.

There is one disease not mentioned where splenectomy has been indicated, and that is sickle-cell anemia. I do not think Dr. Eggleston mentioned that. They are taking out the spleens in sickle-cell anemia. The method is still on probation.

With regard to other spleens, I think the whole question is this: if the spleen is so enlarged that it is a nuisance, take it out, if the patient is in good enough condition. That applies to almost any type of disease, whether it is myelogenous leukemia, tuberculosis, malaria, or whatnot.

With regard to the anemias of infants, I know nothing about children except that they have practically the same anemias that we have. They have the deficiency anemia, whether due to storage or supply, and perhaps the picture is a little more dramatic because they start life as a parasite and then become a pseudo-parasite. The physiologic change from one to the other is quite marked. They also have our inherited diseases, blood diseases, like sickle-cell and congenital hemolytic anemia. In regard to pernicious anemia, I have never seen pernicious anemia in childhood. The youngest patient with pernicious anemia I have ever seen is fifteen years old.

With regard to the diagnosis of pernicious anemia, we have learned about the shift to the left. We call it the Minnesota shift up in our country. We also know about the pernicious anemia neutrophil. In patients who have been eating liver, or taking liver extract before they come to us, the old leukocyte is gone, and we cannot make the diagnosis. Therefore we are going back to clinical principles again and making our diagnosis of pernicious anemia on our physical examinations and histories. I think we can do that in practically 90 per cent of the cases.

Dr. Hill's paper has been so beautifully summarized that I can make no comments on it except that I have seen an appendix removed from a woman twenty-five years old, who had pernicious anemia. Every once in a while a pseudo-acute abdomen is operated upon where there is some type of blood picture. The Wassermann idea, of course, is quite obvious. We always make a Wassermann test on every case that comes in, so that is of no particular interest.

The sedimentation test was mentioned. The sedimentation test is based entirely on conditions obtained by changes in the colloids of the blood. In every fever there is a change of colloids in the blood, so that the sedimentation test is of no value where you have fever. It is just an expression of a physical change.

As to Dr. Hill's change in plasma in which the fibrins are increased, I saw in Science a report from Fisher of Berlin in which he told of pseudo-globulin and euglobulin being nothing but albumin plus heparin, heparin being an anti-coagulant made by the liver.

THE EARLIER DIAGNOSIS OF CARCINOMA OF THE STOMACH*

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Early diagnosis of carcinoma of the stomach is a prerequisite to obtaining best results from surgical treatment. When it is recalled that in 50 per cent of the cases seen at The Mayo Clinic the lesion is inoperable, and in only 25 per cent is it resectable, and that the average duration of the symptoms is ten months, the importance of earlier diagnosis is at once recognized. This is emphasized when it is recalled that one-third of the carcinomas of men and one-fifth of women are in the stomach, and that carcinoma is occurring more frequently than formerly. The responsibility of members of the medical profession in this connection has been increased by campaigns of education, directed toward inducing the public to undergo periodic health examinations, and to seek early professional advice after onset of symptoms.

Earlier diagnosis of gastric carcinoma can be considered under the following headings: (1) the traditional clinical picture of gastric carcinoma; (2) the progress made in the past in the diagnosis of carcinoma of the stomach, (3) the hindrances to earlier diagnosis, and (4) the possibilities and means of improvement.

THE TRADITIONAL CLINICAL PICTURE

The usual conception of symptoms of carcinoma of the stomach includes anorexia, indigestion, vomiting, loss of weight, anemia, achlorhydria, and palpable tumor. Commonly the condition is presumed to present a hopeless situation. This is still the picture of the disease presented in textbooks and to undergraduate students and is truly inadequate and misleading.

THE PROGRESS MADE

Although there is much justification for pessimism, in regard to the treatment of gastric carcinoma, as has been indicated by Christian, definite progress has been made. Thus, in 1914, Friedenwald reported that only 3.3 per cent of 1,000 gastric carcinomas were resectable, whereas Eusterman reported that 20 per cent were resectable among 1,408 cases observed in The Mayo Clinic from 1918 to 1920. McVicar and Daly, from the same institution, found 25 per cent of carcinomas in this situation resectable among 2,087 cases seen from 1920 to 1924, inclusive. Several factors are responsible for this progress. The campaign of education of the laity by the medical profession, by various individuals, and by certain public

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health organizations is undoubtedly bearing fruit. The introduction, improvement, and more general use of the Roentgen rays probably has been one of the most important factors in this progress. Diagnosis of the cause of the various types of dyspepsia has also improved. Physicians in general are becoming more suspicious of the possibility of carcinoma and keener in their recognition of the earlier symptoms of neoplastic processes in the stomach. Teamwork, participated in by physician, roentgenologist, surgeon and pathologist, has become more common than formerly. A further factor in this progress has been recognition of the malignant ulcer, or of the malignant transformation of benign ulcer; such recognition has followed clinical and histopathologic study, such as MacCarty's,¹² of small lesions removed at operation. A final factor in this progress has been earlier and more frequent exploration for gastric lesions. Thus, in Friedenwald's series, exploration was performed in only 26 per cent; in Eusterman and Bueermann's series, in 45 per cent, and in McVicar and Daly's series, in 55 per cent. Unless there is definite evidence that the lesion is inoperable, and if the patient is in reasonably good general condition, exploration will always be justifiable when a competent surgeon and modern surgical facilities are available.

HINDRANCES TO EARLIER DIAGNOSIS

Although definite progress has been made in the earlier diagnosis of carcinoma of the stomach, there is still need and ample opportunity for improvement. It must be admitted that such diagnosis is extremely difficult, and is made more so by a number of factors. The first three hindrances may be grouped; they require no comment. They are absence of knowledge of etiology of carcinoma, absence of any specific test for carcinoma, and the relatively high grade of malignancy of gastric neoplasms.

The fourth hindrance is inoperability of the lesion when symptoms are first noted. I believe that the frequency of instances in which the lesion is inoperable when symptoms first appear has been exaggerated in the literature, but there is no doubt that some persons possess such a high threshold for pain that they are almost wholly unaware of disease in the digestive tract until stasis, actual obstruction, or severe pain and discomfort due to perforation or other complications appear. Indeed, in a few instances the gastric lesion seems to be wholly silent, and the first symptom noted by the patient is due to metastatic involvement of other structures.

The fifth hindrance is that the patient ignores the symptoms until they become alarming. It is always difficult to understand the psychologic proc-

ess behind such delay. In some cases it is due to fear of carcinoma, and the patient delays his visit to the physician as long as possible because he dreads the thought of having his innermost fears confirmed. As long as his fear remains private there is a chance that it is unwarranted, and that he has wholly misinterpreted the significance of his vague symptoms, but when it is confirmed he feels there is no further hope.

The sixth hindrance is that the patient refuses the possible benefits of surgical intervention. A significant reason for this is the belief of many laymen, and of some physicians, that carcinoma of the stomach in all stages presents a hopeless outlook. I do not believe that this is justifiable, in view of the present availability of skillful surgeons and surgical facilities, and the results of surgical treatment. The immediate mortality after operative procedures by skilled surgeons is certainly not formidable. Balfour² reported a series of 113 consecutive operations for malignant disease, with only nine deaths. Preoperative preparation to combat anemia, dehydration, and toxemia, and recent developments in anesthesia have contributed to such excellent records. Furthermore, the percentage of three-year and five-year cures is encouraging. Balfour³ reported 52.5 per cent of three-year cures in cases in which there was no lymphatic involvement, although in a group of cases in which there was extensive lymphatic involvement this percentage dropped to 18. Gatewood reported that 41 per cent of patients who survived gastric resection for carcinoma lived three years or more; 30 per cent lived more than five years, but half of these died subsequently of carcinoma, and 13.6 per cent lived from five to ten years.

A seventh hindrance may be that the physician fails to recognize the situation. In some instances the physician errs by making an incomplete examination. He may lack facilities and training, he may misinterpret his observations, or he may not sense the possible gravity of recent indigestion in the absence of objective physical findings. Although physicians in general are becoming keener in recognition of the earlier manifestations of gastric malignancy, many still adhere to the old textbook teaching that the cardinal symptoms are the manifestations to look for.

Further progress toward earlier diagnosis and consequent earlier treatment, with hopes of better prognosis, will come from overcoming those of the impediments which are capable of being overcome.

POSSIBILITIES AND MEANS OF IMPROVEMENT

The first step in advancement must be a more general and a keener suspicion of the possibility

of carcinoma being present. As Crohn said in his recent book: "Any abdominal digestive complaint beginning after or at middle life, in which no previous digestive symptoms have been complained of, is to be suspected of gastric malignancy. Every case with a previous history of ulcer or a history analagous to that of chronic ulcer which has lasted only a few months to a year or somewhat more, is to be suspected of cancer. Any progressive anemia, cachexia, or loss of weight beginning in adult life, with, or even completely without gastric symptoms is to be suspected of gastric cancer; otherwise the early diagnosis will be overlooked." In other words, persons who appear to be healthy must be suspected of having gastric carcinoma if they give short or atypical histories of dyspepsia.

One of the most important aids to present progress, as stated previously, is the Roentgen ray. This aid will continue to be of supreme importance in demonstrating the presence of an intragastric lesion. In many cases, symptoms referable to the digestive tract are typical of ulcer, but the experienced clinician will not attempt to localize the lesion, because he knows he cannot, and must depend on the assistance of his colleague who is trained in roentgenology. If a lesion is demonstrated in the duodenum and the stomach is clear, all persons concerned will rest much more comfortably, but if there is an intragastric lesion, only the first step in diagnosis has been accomplished. The roentgenologist may be able to aid a great deal by his interpretation of the picture presented on the roentgenoscopic screen or on the roentgenogram, but in a large percentage of cases he can say only that a lesion is present. Lesions 2.5 cm. or more in diameter are usually malignant. The situation of the lesion in the stomach is important. Most ulcerating lesions in the cardia, on the posterior wall of the stomach, or near the greater curvature are malignant. In one-third of the small, ulcerating lesions in the pyloric region, indistinguishable from those of benign ulcer, there are malignant changes. The character of the roentgenographic shadow is suggestive. If the crater appears outside the gastric wall, a benign lesion is suggested, but if it is of the meniscus type, malignancy is highly probable. If a perforating lesion is high in the stomach, but the mucosal markings immediately surrounding it are not obliterated, the lesion is probably benign, but if there is a surrounding halo effect, due to obliteration of the mucosal markings from surrounding infiltration, the lesion is probably malignant. These are only a few of the details the roentgenologist observes in his examination of the stomach. Further details are given by Kirklin and Eusterman in a recent communication.

As an illustration of the fact that the roentgenologist may be uncertain of the nature of an intragastric lesion, it need only be said that in The Mayo Clinic during 1926 in one of every seven gastric lesions which had the roentgenologic appearance of ulcer, carcinomatous change was found at operation.¹ In another series of 507 resectable gastric carcinomas, 10 per cent gave roentgenologic pictures indistinguishable from those of benign ulcer, and in 30 per cent the roentgenologist was unable to say the lesion was malignant.¹⁴ Of course, roentgenologic diagnosis has improved in the few years since these reports were made. Roentgenologic apparatus and technique are constantly being improved, and their use is becoming so general that it will not be long before the public will demand a competent examination by this means in every case of indigestion.

The common types of clinical onset of gastric carcinoma are: (1) vague gastro-intestinal symptoms of short duration, particularly a sensation of early satiety or decreased gastric capacity; (2) symptoms resembling peptic ulcer; (3) symptoms simulating primary pernicious anemia; (4) involvement of the orifices of the stomach; (5) severe gastric complications, and (6) symptoms due to metastasis.

Carcinoma must at some time have a small beginning, and at this stage the victim of the disease usually will have a healthy appearance. It is in the proper interpretation of these small lesions that progress will be made in the future. A certain number of cases of carcinoma of the stomach presents, at the onset and throughout the resectable stage, a syndrome closely resembling peptic ulcer. The percentage of such cases varies, but at least such a syndrome is common. Thus, Eusterman gave the percentage as high as 47 per cent. This group offers the greatest opportunity for earlier diagnosis. It might be assumed that such a history would be confined to carcinomatous ulcer, but we frequently see cases of fungating lesions that are characterized symptomatically by what may be termed an "ulcer course." On the other hand, in some cases of carcinomatous ulcer the characteristics of the syndrome of ulcer are not seen. I make these statements fully cognizant of the fact that benign gastric ulcer is a definite pathologic entity, remaining benign, as a rule, throughout its life history. If a patient presents himself with a history of several years' standing, characteristic of peptic ulcer and without any recent change in the character of the symptoms, if the free acidity is high, and if the roentgenologic examination reveals a small ulcer, it may be presumed that the lesion is benign. On the other hand, if the onset is late in life, if the history is

short, if anacidity or hypo-acidity is present, if the symptoms are irregular, and if the roentgenologic examination gives evidence of a large lesion, one can be fairly certain that the lesion is malignant. When a benign ulcer has become malignant, the clinician frequently can elicit a slight change in the nature of the symptoms. These changes



Fig. 1. The characteristics of this benign gastric ulcer include the perforating feature and the B-type of hour-glass deformity.

have been summarized by Eusterman as follows: loss of periodicity of attacks; loss of periodicity of pain, the pain tending to persist after eating; less severe pain, but a more constant dull ache that is increased by eating; failure of appetite, even with persisting high free acidity; vomiting, if present, no longer gives complete relief from pain; decreasing gastric acidity, and persisting occult blood in the feces. Allowance must be made for the fact that such changes may be induced by benign complications, particularly hour-glass contraction, slow perforation, or obstruction.

It has frequently been suggested that small gastric lesions, even of short duration, should be subjected to a period of intensive medical treatment for ulcer, and of observation, even when the nature of the lesion is in doubt. Undoubtedly some of these lesions are benign and will heal. There are, however, certain objections to such a procedure. First, in many cases of carcinoma of the stomach symptoms have disappeared for weeks or months following such a regimen, but the lesion slowly progresses in spite of subjective silence. Second, failure to respond may mean that a benign lesion has become complicated.

The criteria for continuance of medical treat-

ment and observation of indeterminate, supposedly benign, gastric lesions that have been suggested by various authorities, and most recently emphasized by Jordan, are as follows: (1) the symptoms should be completely relieved; (2) the lesion should show definite decrease in size on roentgenologic examination, and (3) blood should disappear from the gastric content and feces. If these criteria cannot be fulfilled in two or three weeks' time, surgical intervention should be undertaken without delay, because of the imminent danger of malignancy.

Although the importance of analysis of gastric content has been over-emphasized from the standpoint of gastric carcinoma in general, as numerous statistics indicate, there is no doubt of its importance at times, especially in debatable cases. Although normal or high acidity is not uncommonly present in gastric malignancy, hypo-acidity is the rule. Demonstration of early retention and of persisting blood in the gastric content is important.



Fig. 2. Although this malignant gastric ulcer is high in the stomach and small, the irregularity of the niche, its faint definition, and the absence of any associated spasm are typical of a malignant process.

In regard to earlier diagnosis of gastric malignancy beginning clinically without symptoms of ulcer, I can best repeat the quotation of Crohn: "Any abdominal digestive complaint beginning after or at middle life, in which no previous digestive symptoms have been complained of, is to be

suspected of gastric malignancy. . . . Any progressive anemia, cachexia, or loss of weight beginning in adult life, with, or even completely without gastric symptoms is to be suspected of gastric cancer." Earlier suspicion of the possibility of carcinoma and early and thorough examination, including roentgenoscopy by a competent radiologist, repeated if necessary at short intervals, offer the greatest possibility of earlier diagnosis of these groups.

In view of the fact that small gastric lesions often cannot be distinguished from each other, and that the roentgenologist finds a group of such malignant lesions (10 per cent) indistinguishable from benign ulcer, McVicar and Daly have stated their belief that when the roentgenologist is in doubt, the clinician seldom has information of superior diagnostic worth, and exploration should be carried out.

This brings us to the final step in earlier diagnosis of gastric malignant lesions, that is, earlier exploration. When the diagnosis of gastric carcinoma is in doubt, exploration should be resorted to promptly. Findings at operation often ease our consciences in regard to our inability to distinguish clinically a benign from an early malignant lesion. Often the surgeon who can see and feel the lesion is unable to distinguish it from others. After excision, the pathologist may be unable to tell by gross examination, and must depend on histologic examination. MacCarty¹³ stated that in 733 cases he was able to make a distinction only after microscopic study. It should also be remembered that surgery is excellent treatment for benign gastric lesions. In reference to small, circumscribed lesions, Crohn stated: "We are certain that no clinician can differentiate a beginning or established gastric ulcer from gastric carcinoma. Every such case in a middle-aged person should become a surgical one providing the physical condition of the patient and his age warrant such a procedure."

SUMMARY

In spite of much pessimism in any discussion of gastric malignancy, definite progress in earlier diagnosis has been made, through education of the laity, improvement in diagnosis, introduction and development of the Roentgen ray, recognition of the malignant ulcer or malignant transformation of benign ulcer, and earlier exploration of lesions, the nature of which could not be identified. In order that this progress be continued, it is important that the hindrances enumerated be overcome. Members of the profession must become more suspicious of the possibility of malignancy in cases of indigestion of short duration. Roentgen rays should be used more frequently and earlier, and

examination should be made by experienced roentgenologists. The small lesion requires especial care in its interpretation and exploration should be early if any doubt of the nature of the lesion exists. Cooperation of physician, roentgenologist, surgeon and pathologist is necessary in these cases.

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THREE MONTHS PREGNANT UTERUS SUCCESSFULLY VISUALIZED

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The following case is reported chiefly because of the rarity of the procedure and because it was successfully completed without any mishap either during or subsequent to the examination. It is the only one in my experience and would not have been attempted had not the consensus of consultation opinion been against a diagnosis of pregnancy.

CASE REPORT

On November 18, 1930, Mrs. H. B. presented herself at this office complaining of (a) gas on her stomach, (b) nausea and vomiting, occurring any time during the day, (c) menses scant and somewhat irregular, (d) heaviness in the lower abdomen with pain in the lower right quadrant, (e) intermittent diarrhea. The duration of these complaints, with the exception of the gas on the stomach, had been the last several months. The gas trouble had been present for a much longer time.

History: The patient had two children, one three years of age and one ten months. Another full-term child died two days after birth from causes unknown to the parents. Labors were uneventful except for some second degree tears.

On September 5, 1930, she passed a "watery tumor" after she had missed two months of menstruation. Some unclotted blood accompanied the passage but no pain. Following this she suffered from intermittent diarrhea and low abdominal pain, or rather distress, but had no fever; she denied any attempt at intervention. Her periods were on time but of lessened amount.

From former consultation for this present malady she was under the impression that it was a tumor of uterine or adnexal origin and cystic in nature. These consultations, it must be stated, occurred quite some time prior to the present history and examination. She was insistent upon a diagnosis if it were a new growth mostly for traditional reasons.



pounds, temperature 98.6; pulse 64, respirations 20. Ears, nose, throat and cranial nerves were negative. Heart and lungs were both negative.

Physical Examination: The patient was an adult white female, aged 26 years, weight 135. The blood pressure was 125/70. The upper part of the abdomen was negative; there was tenderness over the entire lower abdomen on palpation, but no muscular rigidity in either rectus.

Bimanual Examination: The cervix was hard and contracted; the uterus enlarged and somewhat anteverted and quite tender on examination. The right and left adnexa were apparently uninvolved, although the right ovary could not be felt.

Laboratory Examination: The urine was negative; blood sugar 110 mg. per 100 c.c.; hemoglobin 82.9 per cent (Newcomber-Williams method); erythrocytes 4,700,000. At this time the hormone injection of laboratory animals was not ready for practical application.

Discussion: From the history it might seem that a pregnancy existed except that this pregnancy (?) was different from her three former ones in that her periods came on time, even though of less amount than usual. The blood sugar content did not seem affected. The finding of a hard, contracted cervix caused much doubt as to the probability of pregnancy in this woman. As above stated, she was very apprehensive of malignancy, for traditional reasons. It is certain that in a woman of her age and station in life, pregnancy would be the most likely diagnosis, but there are those who fall among the percentage of unusual cases and so after having summed up the possibilities, an iodized oil x-ray visualization was advised as the last word in differential diagnosis.

Procedure: Under strictly aseptic conditions one container of lipiodol at 99 degrees F. was introduced through a small blunt-headed silver tube just inside the internal orifice of the cervical canal. The procedure was uneventful and no fluid or blood escaped. The plate taken immediately (see illustration) showed a filling defect in the upper left cornu suggestive of placental implantation. In the body of the uterus, which was spherical, there was a filling defect, the outline of which was similar to a two or three months' fetus. A tentative diagnosis of pregnancy of three months' duration was made. She was advised accordingly and was relieved of the fear of malignancy. Her nausea, vomiting, and anorexia gradually subsided.

On June 24, 1931, she delivered a full-term, nine-pound male child following labor lasting eight hours. The child is apparently normal in every respect.

PHYSICIANS OR FOSSILS*

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In the past generation remarkable progress has been made in the Science of Medicine. Within the memories of many gathered here are epidemics of smallpox which have been wiped out by vaccination; scourges of typhoid fever were so important at one time that even today this disease has the signal honor of being the first subject and the one discussed at the greatest length in "The Principles and Practice of Medicine," by Osler and Macrae, and yet the disease itself is almost obsolete; diph-

* Presented before the Cass County Medical Society, April 28, 1932.

theria, claiming hundreds and thousands of our children in years past, has had its fangs removed by the work of that friend of humanity, Béla Schick, M.D., and the common usage of diphtheria toxin and anti-toxin; diabetic patients now live long lives of comfort and usefulness through the use of insulin; the anemias have been curbed by the use of liver extract and dessicated stomach substance; and so on throughout endless profusion could be told the advances of the Science of Medicine. Momentous advances, all of them, for the great good of humanity, and long may they continue!

But what of the Art of Medicine? It is indeed deplorable that this very important phase of medicine is apparently neglected in our medical schools. Our heads were crammed full of the Science of Medicine and the Art of Medicine was largely left to find its own way in our beings when, as, or if it could. The Art of Medicine is that portion of the practice of medicine which determines in a very large measure whether the young physician who desires to follow in the footsteps of Aesculapius finds success or failure at the end of the path. It has two components: the physician's relationship to his patients and his relationship to his fellow physicians.

Of the physician's relationship to his patients little need be said here. In due course of time each physician develops a manner of association with his patients as characteristic as the color of his hair or his mode of speech, and this manner rapidly and indelibly becomes an inherent part of his general being. He learns when to speak and when to keep silent; when to be firm or kind and gentle, or perhaps temper one with the other; when and where sympathy should or should not be shown; and he learns when not to be offended, but when to maintain the smooth, unruffled surface of the gentleman. These are attributes that could not be taught to any person, but are the results of gradual development within that person himself. They often determine a physician's popularity with his clientele, the size of his following and, incidentally, the volume of his income.

The physician's relationship with his brother physicians is of equal, or even greater, importance than his association with his patients, though less direct. One reflects the other and it is difficult to conceive of an artist in one respect being a mere dauber in the other.

How many times have we not seen a physician reluctant to call another in consultation under the guise that to do so would reflect unfavorably on his own ability, when the real reason is that he is afraid the consultant will find something he has missed! A patient dies under such conditions and

we smugly salve our conscience with the thought that we have done everything that it was humanly possible to do. I say to you that professional jealousy has filled another grave! To fit the glove to the other hand, some of us have had the consultant make disparaging remarks concerning our handling of the case in question in the presence of the patient or his relatives, which both disgusts the attending physician and causes the patient to shun the services of one who suggests consultation to him. Fortunately, such an experience is rare, but when it does present itself it reeks with professional jealousy and is largely caused by the actions of a person who simply could not resist displaying his so-called talents, perhaps a form of exhibitionism.

We all know of the circumstances that present themselves to the young physician when he enters his first location, especially if there happens to be one or more physicians already established in that locality. The young physician, being a friendly soul and desiring the companionship of his fellows, makes overtures of one kind or another to gain their recognition. Too often this warmth of feeling, this glowing desire to become one of the select, is dampened or even smothered under the blanket of indifference and killed by the familiar "cold shoulder" attitude. At times these slights are not in evidence as such, but the resentment against him takes the form of knife stabs in the back or childish attempts to undermine the newly formed structure by insinuation. When you see two persons meet on the main thoroughfare of the small town and fail to recognize each other it is a pretty safe wager that both are physicians. Members of one physician's household refuse to speak to anyone connected with the domain of the other unless forced to do so. A mere phalanx is woven into a family skeleton of mastodon proportions and broadcast to the community by the opposition. One tries to steal the patients of the other, and when some fickle member of the populace, for any one of a thousand reasons, transfers his allegiance, such as it may be, the fact is capitalized and a red circle is drawn around that particular date on the calendar and the world is told about the happy event. In fact, the situation is frequently carried to the point where the community is divided into groups, each with its particular physician as the champion. Childish? Yes, but true! Foolish? Assuredly, but the condition exists, and is more common than we like to realize.

In this great country of ours we have an organization known as the American Medical Association. Also, we have in this and every other state of the Union an organization known as the State Medical Society, and in practically every county

in every one of these states we have a group known as the County Medical Society. The national organization is composed of the state societies which are in turn made up of the county societies. Only by being a member of the local county society can anyone become a member of the state medical society and the American Medical Association. A very efficient method of securing members, for surely no one knows more of any physician and his qualifications for membership than the men with whom he works.

The main purpose of all this organization is to provide a means of association among the physicians for their own edification and to protect the public by making a better physician of each member. Realizing, therefore, that in unity there is strength, we are all banded together for our own good and for the protection against violation of our profession. This brief recital of our organization is past history to all of you, but today in the presence of so elaborate an organization there is an appalling lack of unity. Granting that there is a lack of unity among us, it stands us in good stead to look for the cause, of that condition and correct it.

Obviously, the success of the whole enterprise revolves around our local societies and will be useful to us only so long as they prosper. Any regularly licensed physician who will "agree to support the constitution and by-laws of the county medical society, to practice in accordance with the established usages of the profession and will in no way profess adherence or give support to any exclusive dogma or school" is eligible to become a member in good standing of the county medical society. How many of you remember that you once signed such an agreement?

However, we must go deeper into the situation. I hope that there is not a single one here who has forgotten the pledge he once made when he became a member of the county medical society; who pays his dues each year, but for the life of him cannot remember who is the president or secretary of the society; who attends the state meeting every year or perhaps even "takes in" the annual meeting of the American Medical Association half-way across the continent, but cannot remember the time he attended a county society meeting; or who tells the county secretary when he calls about a meeting that he is too busy to come, and simply hasn't the time to prepare a paper. There's consistency for you! We haven't a few hours to spend with our local group, but we can spend a week or more going to the state and national conventions. Not that I wish to belittle either one of these meetings. I think that we should attend every one of them that we possibly can, but not

at the expense of our county medical society, nor is that necessary. I sometimes wonder if it isn't fear that keeps us from taking part in our county meetings, fear of telling the truth. It sounds much better to tell the secretary that we haven't time to prepare a paper than to tell him that we haven't the necessary information or ability. It sounds better to the folks back home to say that we are going to the state or national convention than to say that we are merely going to meet with the group in the county, and it makes much better advertising, if we are so inclined. We like to have our people know that we belong to the county medical society, but we would rather not have them know that we belong "for business reasons," which I understand is the cause of some people joining a church. To sum up the whole matter, we wish to have the prestige of membership in these organizations, but are too lazy to do more toward their growth and usefulness than merely write a check each year.

It may be that I am being pessimistic about our members, but at the same time, I doubt if you could find very few county medical societies in the United States that do not harbor some of these members within their fold. Are you sure that at this very time we are not fighting for our very existence as individual practitioners of medicine? Do I need to mention the scope taken in by the veterans bureau in caring for former service men, and their *families*, or any of the other various health organizations throughout the country? May it not be possible that all of these are a forerunner of the much dreaded octopus of state medicine that will eventually absorb all of us within its tentacles unless we are on the alert?

Never before has there been a greater need for unified action within our ranks than at the present time. Never before have we needed the complete cooperation of every ethical physician, both in effort and finances, as we do now. If we are to avoid the pitfalls of state medicine and the encroachment of the cults and -isms we must restore our ranks and leave not the smallest point unprotected, both within and without. Internal dissension would be smothered in the blanket of its own impotence in the midst of a united body of active workers. A formidable wall of defense could repel all the cultists and charlatans who might desire to overthrow our structure. Even our most rabid and fanatical politicians would shun the very mention of state medicine in the face of the unified organization we could, if we would, develop.

In order that we may preserve for posterity the organization that has been built for us by our illustrious predecessors it is necessary that we have

the soldiers and the ammunition—the members and the dollars. Each and every one of us must be willing to give of our time, our energy, and our money. We must place our soldiers, armed with ammunition, within the fortress of our unified organization.

Just as surely as we fail to heed the warning, just so surely are we doomed to failure. To stagnate is to regress and in some distant day an enterprising archaeologist shall find in the strata left by time the remnants of the once organized medical profession and each little calcified lump in that mass will be a member. Gentlemen, in all sincerity, I ask you—*Shall we be Physicians or Fossils?*

The trust of generations of humanity is ours and the hope of the multitude to come belongs to us. To us, also, belongs the blame if that trust be violated and the condemnation if that hope be disappointed. I earnestly hope that I have not injured the feelings of any present here and if I have, I am indeed very sorry, but if, by disturbing your complacency, I have caused you to become imbued with a greater zeal and to make a decision to support your county medical society, your state medical society and the American Medical Association to the fullest ounce of your ability, I am glad. The defense, if defense is necessary, rests its case, and the verdict is up to you, gentlemen.

ADDISON'S DISEASE

WITH A CASE REPORT SHOWING THE EFFECT OF CORTIN*

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Thomas Addison, of Guy's Hospital in London, was the first to describe the symptom complex we now know by his name. His monograph, "The Constitutional and Local Effects of Disease of the Suprarenal Capsules," which was published in 1855, presented the matter so accurately that little has been added to our knowledge of the symptomatology of the disease.

The disease is relatively rare, occurring more frequently in the male and most commonly in the third and fourth decades.

Originally the symptom complex was thought to be the result of hyposecretion of the adrenals. We now know that it is caused by destruction of the cortex of the adrenal glands. It has been impossible to produce a typical syndrome in laboratory animals by adrenalectomy because such a process causes a sudden loss of the cortical tissue and the clinical condition is the result of a chronic

process. Rogoff¹ has shown that laboratory animals can live in a fairly normal manner with one suprarenal gland completely removed and only a small portion of the cortex of the other adrenal remaining. These animals die in a few days when this remaining cortical tissue is removed, just as do the animals in which a bilateral adrenalectomy is done at one operation. Rogoff,¹ Swingle and Pfiffner² and Hartman³ have demonstrated that adrenalectomized animals can be kept alive and healthy by a substance prepared from the cortex of the adrenals.

In a review of twenty-eight autopsy records from cases of Addison's disease, Barker⁴ found bilateral tuberculosis of the suprarenal glands in twenty-five, and advanced suprarenal atrophy in three. Acid-fast bacilli were demonstrated in the suprarenal tissue of eleven of the twenty-five cases showing tuberculous lesions. Healed tuberculous lesions of the lungs were found in all of the cases with tuberculosis of the adrenals, and active tuberculosis of other organs was found in twenty-two of the cases.

Barker⁴ also reviewed seventy-three autopsy records in which suprarenal lesions were found, but in which the clinical syndrome of Addison's disease was lacking. He feels that the reason malignancy does not cause Addison's disease is the fact that patients with malignancy do not live long enough to develop the syndrome.

The syndrome of Addison's disease is characterized by asthenia, pigmentation, and hypotension. Many patients have gastro-intestinal upsets evidenced by anorexia, nausea and vomiting, and diarrhea. Rogoff¹ found that his patients developed a distaste for fatty foods, and he also found marked tenderness in the costolumbar angle. The asthenia usually precedes the pigmentation and the hypotension is discovered incidentally. The discoloration of the skin is gradual, assuming a smoky, dingy appearance with areas of deeper color on hands, face and other points where clothing presses. The skin is soft and smooth and there is rarely any pruritus. A peculiar fish-like odor is frequently present.

Contrary to Addison's original belief, there is rarely any anemia. The blood sugar is usually low and the blood urea high. Other laboratory tests are negative.

Surgery is contra-indicated in cases complicated by Addison's disease. Snell and Rowntree⁵ report eight cases in which surgical procedures precipitated a fatal outcome.

Previous to the introduction of the cortical extracts, the treatment was unsatisfactory and a fatal prognosis inevitable. The dosage of the extract depends on the severity of the case. By decreasing the injections until the symptoms

* Presented before the November, 1931, meeting of the Augustana Hospital staff.

threaten to return, a minimal dose can be determined. Since the disease is due to a destruction of the cortex, it is probable that the injections will have to be continued indefinitely, or at least given intermittently. Hartman⁶ reports two cases of Addison's disease in which cortin was used. The first patient improved over a period of eight months before contracting bronchopneumonia. His second patient was moribund on admission and died two days after treatment was started. Rowntree⁷ reports the use of the extract of the suprarenal gland in twenty cases. He feels that the most striking effect is the decrease in nausea, the cessation of vomiting and the return of a feeling of well being.

CASE REPORT

The patient, a white woman 31 years of age, entered the Augustana Hospital on the service of Dr. Anders Frick, September 21, 1931. She stated that early in the spring of 1930 she had begun to feel tired and listless. A few months later her skin began to deepen in color. During the fall and winter of 1930 the weakness and listlessness increased and the pigmentation of the skin deepened.

In March, 1931, she had influenza and from that time she was too weak to continue doing her housework. In July she began to have attacks of nausea and vomiting. These lasted two or three days at a time. One month previous to her admission to the hospital she began to vomit continuously. She was given salt solution and glucose intravenously a few days before her admission, but when first seen by us she was still violently nauseated and was vomiting occasionally.

The physical examination revealed a small, poorly nourished white woman who was too weak to turn herself in bed. Her skin was a dingy or smoky shade of tan. On the upper lip, hands, elbows, knees, and in the axillae and groin, there were darker areas. The skin was soft in texture. A peculiar fishy odor was present. The heart tones were faint and the pulse was small and soft. The systolic blood pressure was 55 mm. of Hg., and the diastolic 40 mm. of Hg. No other positive findings were elicited.

Laboratory examinations: erythrocytes, 4,500,000; leukocytes, 12,000; hemoglobin, 70 per cent; blood urea nitrogen, 46.1; blood sugar, 100. The urinary findings were negative. The von Pirquet test was mildly positive. No evidence of active tuberculosis was found.

A diagnosis of Addison's disease was made and on the ninth hospital day treatment with cortin was begun, 5 c.c. being given intramuscularly every four hours. Two days later she was able

to eat without vomiting. The third day she had no nausea and sat up with the aid of a back rest for her meals. After five days the dose was decreased to four injections of 5 c.c. each a day. As strength and appetite returned the dose was cut to two injections of 5 c.c. each a day. On the eighteenth day after starting treatment the dose was cut to two doses of 2½ c.c. each. The next day she was nauseated and did not feel strong enough to get up. The dosage was again increased to 10 c.c. a day and the patient's appetite returned and she sat up several hours a day.

During this period of treatment the pigmentation decreased slightly, the blood urea nitrogen reading dropped from 46.1 to 26.9, and the blood pressure gradually increased to a systolic reading of 85 and diastolic reading of 55 mm. of Hg.

On the twenty-seventh day after beginning treatment she began to menstruate and the nausea and weakness returned. The dosage was increased and improvement was noticed. Until her discharge on the thirty-sixth day of her treatment, she received 20 or 25 c.c. of cortin daily, and she remained quite cheerful and was free from nausea, although she did not feel as strong as before her relapse.

After going home she received 15 c.c. of cortin a day. She was soon able to sit up for her meals, but after a period of about three weeks she again grew weaker. She became nauseated, began to vomit and, despite increased doses of cortin, died one week later.

It is not possible to draw definite conclusions from one case, but we did observe: (1) a cessation of nausea and vomiting, (2) an increase in strength, (3) a decrease in the pigmentation, (4) a slight rise in the blood pressure and (5) an improvement in the patient's mental attitude.

The writer wishes to take this opportunity to thank Dr. Frick for permission to report this case.

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STATE HEALTH COMMISSIONER'S PAGE

D. C. Stulman, M.D.

COOPERATION IN PREVENTIVE MEDICINE

Preventive medicine and sanitary science have developed at a very rapid pace in the past two decades. This development has given us facts far beyond its application to society at present and even for many years in the future.

The problem confronting us is so to present these facts that the public may understand their full meaning and purport.

We have made great progress, seemingly, in the reduction of death from tuberculosis. Have we, as physicians, imparted all the knowledge we possess to the public? Have we applied all the knowledge we possess toward the prevention of tuberculosis?

Infant mortality has been grealy reduced in the last decade. Have we advised the public sufficiently and applied all the facts science has given us? Would it not be possible again to cut in half the infant mortality rate?

We have facts sufficient to control absolutely tuberculosis, typhoid fever, diphtheria, smallpox and many other communicable diseases if the knowledge were generally known to the public and applied.

Over \$35,000,000 would be saved the people of our state from preventable sickness and deaths each year if we could maintain a 50 per cent reduction in the occurrence of illness. (See costs of medical care.) This would not affect the earning capacity or the prosperity of the medical profession. On the contrary, the private practice of medicine would be much benefited.

To quote Dr. Wm. H. Ross, former president of the New York State Medical Society:

"In every community where the profession looks upon medicine as a community problem and has cooperated with other agencies under the leadership of medicine, the public has been better served and *medicine has been more prosperous*.

"Organized medicine has advanced just as it has built new pathways of public service, made contact with public interest, and established relationships with them."

Therefore, the importance of health education as an economic need cannot be overestimated.

Leadership is essential and no group is better qualified to lead and direct this program than the medical profession. The achievements of this profession have resulted in the control of disease that decimated whole populations—and to the medical profession preventive medicine owes its origin and development.

It is only by unity and better understanding that the best results may be obtained.

"It is not the individual, or the Army as a whole; But the everlasting teamwork of every bloomin' soul."

PREVALENCE OF DISEASE

DISEASE	August	July	August	Most Cases Reported From
	1932	1932	1931	
Diphtheria	28	46	15	Polk, Pottawattamie
Scarlet Fever.....	35	34	36	Polk, Cerro Gordo, Pottawattamie
Typhoid Fever.....	35	16	17	Clarke, Boone
Smallpox	16	21	32	Tama, Woodbury
Measles	4	17	8	(For State)
Whooping Cough.....	53	46	62	Warren, Johnson, Woodbury
Cbs. Meningitis.....	1	1	2	Pottawattamie
Chickenpox	7	24	14	(For State)
Mumps	14	23	14	Page
Tuberculosis	56	56	48	Woodbury, Montgomery
Undulant Fever.....	15	9	4	Cerro Gordo, Louisa
Syphilis	304	186	224	(For State)
Gonorrhea	312	265	490	(For State)

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Iowa State Medical Society

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BLESSED ARE THE WEARY

Records of the life of the Nazarene indicate that he had compassion for the poor, the lowly, the hungry, the sorrowing. For the weary He promised rest.

Perhaps the world is out of sorts because it is weary, gorged with wealth, gorged with mass production and efficiency, wearied by statesmanship, fettered by machinery. We have become exhausted producing goods, thinking the effort worth while perhaps because presently we should be able to rest and enjoy what we had produced. But in this we failed to see the irony of the situation. Having produced, we encountered the terrific task of consuming, and having consumed, we must produce. The cycle was a vicious one. We have all been caught in its whirl, the physician along with the rest of mankind. We labored, we studied, we strived not only to improve our own opportunities, but to advance above our fellow. Having been caught in the whirl of progress, could we deplore the fact that our rise meant another's fall? In such a mad world there was no place for fraternity. Our god has been that of success. And in achieving this goal we have become tired, weary of the struggle.

Perhaps to rest will prove a blessing, and during this period of inactivity, of wearied lethargy, of economic stagnation, we may find time to appreciate values, to view life from more normal standards. From this enforced repose accompanied by its poor, its lowly, its hungry, and its sorrowing, we may emerge with truer and saner standards of living, with greater tolerance, with less arrogance, and withal, a greater degree of fraternity.

ADMINISTRATIVE FUNCTION OF THE
STATE SOCIETY

In a recent issue of the JOURNAL (August, 1932) there appeared an editorial adducing education as one of the principal functions of a state medical society. There is another function, perhaps more selfish in motive, but none the less important to the organization, since it represents the nucleus which determines the vigor of the Society. This may be termed the administrative, or executive function. By its vital force are engendered all other capacities, educational, legislative, economic.

It is this nucleus, existing materially as the central office, through which flow, or should flow, all currents of Society policy and activity, guided, directed and unified by the Society officary. Each officer, department and committee fills a particular role in the scheme, some advisory, others more specifically administrative. In the House of Delegates each year are determined the policies which shall shape the Society for a twelve months' period, and it becomes the responsibility of the officers to interpret and enact these policies.

All this is fundamental, but in an organization "not for profit," offering no political or financial plums as reward for labor, and held together by so lofty a purpose as "the extension of medical knowledge and the advancement of medical science . . .," we must occasionally pause to consider the concrete means by which these high-sounding aims may be achieved.

The commodity which the physician offers for sale cannot be measured by the yardstick, pound or liquid measure. Nor can its quality or amount be ordered by the customer. As merchant of his wares, it is the physician's peculiar province to determine the needs of the customer. This determination, multiplied to the needs of a population, becomes tangibly involved in the economic and political problems of a state. The medical profession, willingly or not, finds itself imbued with the responsibility of gaining by legislative enactment those measures which it deems necessary to the health of the public. Thus, through its Committee on Public Policy and Legislation, is directed the legislative function of the state society. By cooperation with the Department of Health, through the Law Enforcement Division, the health laws of the state are enforced.

That health legislation should have its origin and leadership in the medical profession is self-evident. For some time, popular lay journals have been furnishing much material to further excite our already health-sensitive public, with the result that numerous lay organizations have sprung up, like mushrooms, to direct the interests of the public in health matters. These activities should

have the direction and guidance of the medical profession.

The best example of such an activity of recent years was the Sheppard-Towner Bill. For seven years the work instigated by the enactment of this bill was duplicated in the work of the United States Public Health Service. After spending millions of dollars from both federal and state sources, with no definite evidence of any benefits derived, the Sheppard-Towner Act was repealed in 1929. It failed because it was not sponsored by organized medicine. Had the same millions been turned over to the United States Public Health Service and used where needed, much more good could have been accomplished. The last Congress tried to renew this same federal subsidy in matters pertaining to health by enacting the Jones bill, but the attempt was unsuccessful.

A second administrative function of the State Society is directed cooperation with the various state and local lay health agencies. Here, again, the activities of these agencies should be supervised by the medical profession. This fact was recognized in the Forty-third General Assembly by the passage of the permissive county health unit law. A united county medical society, the unit of organized medicine, has the qualifications, the willingness, the interest in its own citizenry, to promote and execute the health activities of the county. Where state or federal subsidy is needed, the request for such subsidy will win its merited consideration if coming from the medical profession.

The correlation of the activities of the various county societies is a third administrative function of the Society. In the strength of the integral units, the component county societies, lies the strength of the parent organization. The State Society is directed by the policies of these units, but upon the wise guidance of these policies and the furtherance of fraternity, depends the effectiveness of their combined purpose. Certain agencies of the State Society render specific assistance to the individual members, such as medico-legal defense and protection. The Medical Economics Committee has been effective in advising the members as to the fallacy of schemes offering pseudo-ethical collection services, and participation in various professional listings of doubtful value to the physician. These are sub-heads under the general classification of "service" to the members of the organization, but their numbers and types are numerous. They represent, as a group, one of the more concrete aspects of the administrative function of the Society.

Prosaically entangled in the execution of all activities of the Society is the administration of

its fiscal affairs. The very momentum of Society enthusiasm, doubling and trebling the activities and expenses, places a heavy burden on the Society's dollars. A judicious budgeting of these dollars, and an occasional forceful tightening of the purse-strings is by no means the least of the administrative functions.

TYPHOID IS INCREASING IN IOWA

In a magazine having national distribution, there recently appeared an article, written for the lay reader, discussing the trend in morbidity and mortality for the more common diseases in various parts of this country. It was pointed out that, following the memorable discoveries of such pioneers as Ronald Ross in England, and Reed in America, the public became conscious of typhoid fever as a disease of filth and one which could be controlled at the will of the community; or as Sir William Osler has aptly stated, "typhoid fever is everywhere an index of the sanitary intelligence of a community." With the awakening of civic consciousness in regard to the control and management of typhoid fever, a vigorous campaign of prevention was waged which resulted in the reduction and, in many instances, the abolishment of a morbidity and mortality rate from this dread disease. Physicians and business men in general were interested in the program because of the tremendous economic saving to their community as well as from the humanitarian aspect of preventing a most exhausting malady. Having secured, however, an almost absolute safety from this disease through vaccination and the many channels of sanitation and public health employed, our public was apt to sit quietly by and see the insidious return of this preventable scourge without protest. They point out that in several states, notably, Iowa, the disease incident from typhoid fever has shown a steady increase during very recent times. That this increase is not solely a result of the recent economic conditions is demonstrated by the fact that in several other states a continuation of the program of lowering mortality and morbidity from this disease has been effected, while in a second group of states a low level has been maintained.

The following table details the morbidity and mortality in Iowa since that date:

Year	Cases	Deaths
1924	103	65
1925	123	80
1926	126	52
1927	221	54
1928	118	54
1929	288	58
1930	107	40
1931	103	35

From this study it is readily seen that prior to 1930 the charges made are supported by these data and Iowa was regressing rather than progressing in her stand against typhoid. The two years immediately past show a marked improvement in both the number of cases reported and the deaths resulting from this disease.

However, the year 1932 has shown a serious and sharp increase in the prevalence of this disease. Recent epidemics of typhoid fever demonstrate the insecurity of our position. For the past two months our morbidity rate has been far worse than for a corresponding period last year as attested by the following figures:

CASES REPORTED

	1931	1932
September	16	66
October	25	157

The marked increase in the number of cases reported during the past two months is explained by outbreaks of the disease in four separate localities. Thirty-two cases were reported in Hardin County and the common source of infection traced to a milk route. In Clarke County a man returned to his family ill following a trip to Illinois. Twelve cases have developed among his contacts. In Shelby County a lady visitor from Nebraska left a group of four cases to testify to the nature of a recent illness which she had suffered. Sioux County reported eight cases resulting in a community having in common a contaminated water supply.

Is it true, as cited in the article to which reference has been previously made, that Iowa, having at one time reduced the danger from typhoid, is content to calmly ignore the insidious advances of such a menace until it again becomes a problem of large proportions? All agencies employed in conducting the successful campaign against typhoid fever during the years 1927 to 1929 were still available. The only factor which appeared lacking was an individual interest in the problem.

Have we not, as physicians, assumed that the problem of typhoid fever is a remote one, and upon this basis failed to give due and timely warning to our patients relative to the hazard? How many patients, Doctor, have you advised to have the prophylactic inoculation during the past year? What efforts have you expended to further the work of the state agencies in conducting a program of prevention against this disease? The problem of typhoid fever is a large one. Our opportunity to control this disease is at hand. Let us not neglect it. "Eternal vigilance is the price of safety."

TUBERCULOSIS AND THE DEPRESSION

A curious paradox of the present depression is that apparently contrary to all previous experience and belief the death rate from tuberculosis has not risen. It has been preached for years that "poverty and tuberculosis go hand in hand," yet even after two years of lowered living standards the tuberculosis death rate continues to fall steadily.

Does this destroy all previous knowledge? Have tuberculosis associations throughout the United States been broadcasting incorrect information? Has the money that has gone into health education year after year been wasted?

The answer is emphatically "No."* The need for spreading the doctrine of "Watch Your Health" is greater now than it ever was, for in addition to the threat contained in lowered living conditions is the danger of worry, which often is ignored, but which is of great importance medically. It should be remembered that tuberculosis is not an overnight disease that comes on one suddenly. It usually steals into the body, taking its own time to establish a strong foothold before giving notice of its presence. Therefore, although it may seem surprising that the tuberculosis death rate continues to go down during the present depression, it is impossible to guess how many people are now contracting the disease which in many cases will not make its presence known for years to come.

Again, many persons are on the ragged edge of health, and a slight push, such as lack of food, or even worry, is likely to tip the balance against them.

There are also the persons who, without knowing it, have the disease, and in their case the end of the battle may be hastened by excessive deprivation.

Most important of all is the possible effect of the depression on children. Our present knowledge of how tuberculosis begins and develops during childhood is that the child's living conditions and environment help to determine whether or not the child with early lesions will later develop the adult type of the disease. Many children now heavily infected are at present presumably suffering enough deprivation to cause the balance to turn unfavorably, and as a result they will later become victims of the disease. Thus, the havoc wrought by the present depression is not likely to show as a sudden hump in the mortality curve, but will be spread over a period of years, which will make the situation seem less important than it actually is.

* A. Schaeffer, Jr., National Tuberculosis Association, 450 Seventh Avenue, New York City.

Children in a tuberculous household are very likely to become infected. It is for this reason that when a doctor discovers tuberculosis in one of his patients he urges that every member of the family shall be examined to discover which member is giving it to the others.

To put it briefly, "Tuberculosis causes Tuberculosis—Every Case Comes from Another," and so important do the 2,084 affiliated tuberculosis associations of the United States consider this point that they have chosen it for emphasis as the theme of the fifth annual Early Diagnosis Campaign. During that time closer cooperation in discovering cases of tuberculosis will be sought among doctors, health officers, public health nurses, and social workers, and everyone who suspects he may have tuberculosis will be urged to have a medical examination to make sure. If anyone finds he has the disease, he will be urged to secure medical examination for other members of his family to discover the source of the infection, for only by "Finding the Other Case" can tuberculosis be overcome and its spread stopped.

SIR RONALD ROSS

Last year it came to the attention of American physicians that Sir Ronald Ross, discoverer of the malaria parasite, having spent a busy life in the pursuit of medical problems, had arrived at more than his allotted four score and ten years only to find himself in practically a destitute condition. The appeal was made through many avenues to secure funds, not only to provide this noble investigator with the necessities and a few of the comforts of life, but also, during his living years to create a memorial in honor of his lasting contribution to human life and welfare. How successful the campaign was, the writer is not prepared to state, but it is known that sufficient funds were made available so that this aging scientist was provided with the comforts which he had so justly merited. News has just reached us of Sir Ronald's death, and, not only the medical profession but sanitarians and public-spirited citizens throughout the world will mourn his passing.

Back in 1897 and 1898, Sir Ronald Ross brought to a conclusion a series of experiments and observations concerning the etiology of malarial fever which conclusively established the causative role of the mosquito in the spread of this disease. The brilliancy of this work was recognized in the award of the Nobel Prize for 1902 to this scientist for this memorable work. But, as is the case with many of his English colleagues, Sir Ronald excelled not only in medicine but also as a composer, poet, playwright, novelist, and mathematician. He entered the Indian medical service at the age of

twenty-four and at that time began his first researches into the transmission of malarial fever. It is said that some ten years later his superior officers in this service, becoming impatient with his investigation, issued orders that his experiments and observations must be brought to a conclusion in six months' time. Equal to the emergency, this persevering scientist completed his investigations and postulated his theories which have stood the test of time and which have proved one of the greatest boons of all time to mankind.

He concluded his service with the medical department of the Indian service in 1902, but has continued to maintain a very active and constructive influence in medicine. His death closes an active and constructive career; one whose influences are as far-reaching as the walks of civilized man.

PATENT MEDICINE ADVERTISING

Contrary to the belief of some, even a newspaper editor has a conscience, and his soul cannot be bought for a price. The time is not so remote when, perhaps, this was not so literally true. Then, advertising copy was not questioned, except as to whether the advertiser could pay for the display. It was assumed by the newspaper that the reader possessed a discriminating intelligence, and on that basis might evaluate the merits of the advertising. If he was sufficiently gullible to be taken in by a "gold-brick" scheme, this was certainly not the publisher's concern. If he possessed a cancer, and wished to take a bottle of Dr. So-and-So's Wonderful Cancer Cure, that was his business, and his funeral.

Advertising today is done on a much higher plane. Publishers have realized that if advertising is to be valuable to their advertising clients, it must be entirely trustworthy for their readers. Some periodicals have gone so far in this regard as to guarantee all advertising, and should a reader be defrauded or dissatisfied with his purchase made through an advertiser in that particular journal, his money will be refunded to him.

Patent medicine, particularly of the cure-all type, has been one of the greatest offenders in the unmerited use of advertising space. It has recently come to our attention that a concern, claiming to be importers and exporters of "a wonderful remedy for restoring youthful strength to both men and women," has sent advertising contracts to many newspapers and other publications for the display of their advertisement, offering their great boon to persons who have "lost or are losing their vital physical powers." Surprising as it may seem, a copy of this advertisement was submitted to THE JOURNAL, an honor which, of

course, we promptly declined. Some newspapers over the state have accepted the advertisement, and are announcing to their readers this wonderful cure. Others have ignored the offer, while one* has very sanely discussed the matter in an editorial which we wish to quote.

"Now comes an advertisement in *The Democrat* in which claims are made that a certain remedy has helped millions of men and women who have lost or are losing their vital physical power. They claim that after 35 years of practice and research that the weakness of man's glands was also responsible for other troubles: high blood pressure, hardening of the arteries, physical exhaustion, dizziness, depression, etc. According to their claim all these ailments could be removed. Boney! Yes, and they scheduled the ad to run for thirteen weeks. All we had to do was run it, send them a copy of proof of ad and they would remit upon receipt of invoice. No reference. Now here is where we are going to save some unfortunate reader who may accept this as their salvation to regain their lost health. We are refusing to run it. If this company is O.K. we will be out just about 50 bucks. But what is 50 bucks if we can save, perhaps \$5.00 to one reader. (\$5.00 is their charge for a two weeks' treatment.)"

*Waukon *Democrat*—Aug. 17, 1932.

SICKNESS AMONG INDUSTRIAL EMPLOYEES DURING THE FIRST NINE MONTHS OF 1931

Reports of sickness causing disability for more than one week among members of a group of industrial sick-benefit associations and company relief departments reporting to the United States Public Health Service show that the sickness incidence or frequency rate during the first nine months of 1931 was practically the same as in the corresponding period of 1930, and 24 per cent below the rate for the same months in 1929. Complete data for the last quarter of 1931 have not yet been received, so that a report for the year as a whole cannot be made available at this time.

It will be recalled that a mild but widespread outbreak of influenza occurred in January and February, 1931. During the first quarter of 1929, also, influenza was prevalent. It is of interest to note that the sickness rate exclusive of "influenza" was 10 per cent below that of the preceding year, and 18 per cent less than the rate for the first nine months of 1929.

An interesting point and one which agrees with the mortality records for about 18 million industrial life insurance policyholders is the relatively low rate of pneumonia in 1931 considering the January-February outbreak of influenza. The pneumonia case rate for the reporting establish-

ment was lower in the first nine months of 1931 than in the same period of 1930, which rate in turn was lower than that of 1929. Favorable rates in 1931 compared with either of the two preceding years are shown also for bronchitis, and for tonsilitis and other diseases of the pharynx and tonsils. Little change is indicated in the frequency of new cases of tuberculosis of the respiratory system. Mortality from this cause, however, decreased in 1931.

For diseases of the digestive system the frequency of cases was 12 per cent below that of the first nine months of 1930, and 20 per cent below the rate in the corresponding period of 1929. An even larger reduction is shown in the incidence of diseases of the skin. A type of illness which has not decreased, but which shows a slightly higher incidence than in 1929 is the group diagnosed as neurasthenia, nervous disorders, and the like. In 1921, when economic conditions were similar to those prevailing now, especially as regards the insecurity of jobs, the neurasthenia rate among industrial employees ascended.

The reports on which these rates are based cover about 25 industrial establishments, employing approximately 150,000 men, which have reported continuously throughout the last three years. The plants are located principally in the area east of the Mississippi and north of the Ohio and Potomac rivers.

The record covers, in the main, men who are employed, but includes those working on a part-time basis. Some unemployed men evidently are included, because the by-laws of about one-third of the reporting associations contributing one-seventh of the population under consideration state that membership may be retained during furlough or lay-off if dues are paid. However, in 60 per cent of the reporting organizations involving 83 per cent of the number of men covered, membership is terminated within three weeks of the date of lay-off.

TWENTY-FIRST ANNUAL MEDICAL CLINICS

November 11 and 12

University Hospitals, Iowa City

The annual clinics of the Medical College of the State University of Iowa will be held on November 11 and 12. Those expecting to attend the clinics are urged to notify the Dean's office promptly of their intention.

On Saturday, November 12, the Iowa-Purdue football game will be played.

Assistance in making hotel reservations or in securing seats for the football game will be given by those at the Medical College.

THE PRESIDENT'S PAGE

I

The Iowa State Medical Society should have no part in partisan politics. It should make no difference to the Society whether the Democrats or the Republicans control the state, but it is incumbent upon the Society and its individual members to see that public health matters and matters pertaining to the profession are properly controlled. To this end, it is the duty of the members to ascertain the attitude of legislative candidates on health and medical legislation, and where education is needed, to supply information and guidance.

A matter to be brought before the next legislature which is of importance to the medical profession and to the people of the state, is the correction of the inadequacies of the Perkins, Haskell-Klaus law, the law which governs the care of indigent patients at the University Hospitals.

According to the law as it now operates, the expense of caring for all indigent patients at the University Hospitals is defrayed by a general tax fund. This expense includes medical, surgical and nursing care, laboratory and x-ray services, transportation to and from the hospitals, and the fee for an attendant when one is necessary. The law makes no provision for care of the indigent patient after he has returned home, nor does it place any restriction upon the number of times a patient may be admitted to the University Hospitals after the determination of indigency.

A major discrepancy of the Perkins, Haskell-Klaus law is that it produces an unequal distribution of the benefits derived from the state institution among the various counties, and hence, in effect, an unequal distribution of the tax monies paid. Thus, counties adjacent to Iowa City, particularly those with larger cities, such as Linn County, have been sending a large number of patients to the University Hospitals annually, and have consequently been receiving a proportionately large benefit from the tax monies paid. On the other hand, the more distant counties, such as Woodbury, send fewer patients and receive correspondingly less benefit.

The University Hospitals were built and equipped for the two-fold purpose of caring for the indigent sick of the state, and for providing medical education. The comprehensive report of the Medical Education and Hospitals Committee of the Iowa State Medical Society, published in December, 1930, showed that because of the limited appropriation, the hospitals were able to operate at only two-thirds capacity and the waiting list in June of that year numbered about 2,000. (At present it numbers approximately 4,500.) Because of this fact, and because of the lack of discrimination in the types of cases sent to the hospitals, the clinical material available for the instruction of medical students has proved inadequate.

The state medical society, through its Committee on Public Policy and Legislation, seeks to remedy these evils by legislation which would charge back

to the counties a fixed percentage of the hospitalization charges, on a per diem basis. A careful study of the cost of operating the hospitals and caring for indigent patients in the past, would indicate that if the cost of maintenance of the hospitals, plus the cost of transportation of patients to and from the hospitals were paid out of the general tax fund, and 50 per cent of the cost of hospitalization per patient per day were charged back to the county from which the patient was committed, the hospitals could run at capacity, the waiting list would be shortened appreciably, and the result would further be an equalization of taxation and benefit therefrom among the various counties of the state. Thus, to use the examples cited above, Linn County in sending a large number of patients to the hospitals, would pay a larger amount for their hospitalization, while Woodbury County would pay less for its fewer number of patients, and the greater cost of transporting patients to and from Woodbury County would be borne by the general tax fund. The expense of caring for patients in such state institutions as the hospitals for the insane, Oakdale Sanitarium, etc., is at present referred back to the counties from which patients are committed.

II

It is probable that the osteopaths of Iowa will demand of the Forty-fifth General Assembly, as they did of the Forty-fourth, the full rights and privileges of the graduate doctor of medicine. The medical profession holds no tenet against the practice of osteopathy, although its position in this regard has often been misconstrued. It does contend, and will always contend, that an osteopath must limit his practice to osteopathy; that if he wishes to practice medicine and surgery, he must be required to obtain the equivalent of the seven years of scientific education now necessary for an M.D. degree, and he must pass the examination required of medical graduates for licensure. Your legislators should be convinced that in no other way can the present high standards of medical and surgical practice be maintained. In many states this problem has been met effectively by the enactment of a basic science law.

III

The November election is only four weeks away. I urge every county society to consider these matters at once and provide that certain men from each county interview each candidate for the House and Senate before election, and if a particular candidate cannot be brought to see the reasonableness of these measures, then the influence of the medical profession in the county should be exerted to elect a candidate whose views on health and medical legislation are sound.

H. H. Bowen

SPEAKERS BUREAU ACTIVITIES

Extension post graduate courses—

Obstetrics-Pediatrics; by E. D. Plass, M.D., and P. C. Jeans, M.D., College of Medicine, State University of Iowa.

Surgery for the General Practitioner—Under the direction of H. L. Beye, M.D., College of Medicine, State University of Iowa.

Mondays at Washington—Beginning Monday, October 3.

Wednesdays at Monticello—Beginning Wednesday, October 5.

Thursdays at West Union—Beginning Thursday, October 6.

Fundamentals of Medicine—Post graduate course at Des Moines every Friday for ten weeks, beginning Friday, October 7.

Oct. 7—Recent Conceptions of Immunity. Ludvig Hektoen, M.D., Chicago.

Oct. 14—Cellular Immunity. Paul Cannon, M.D., University of Chicago.

Oct. 21—Inflammation. Harold E. Robertson, M.D., Mayo Foundation.

Oct. 28—Focal Infections—Henry L. Ulrich, M.D., Minneapolis.

Nov. 4—Rheumatic Disease. Ralph Pemberton, M.D., Philadelphia.

Nov. 11—Blood Diseases in Relation to Eye, Nose and Throat. C. W. Baldrige, M.D., University of Iowa.

Nov. 18—Sympathetic Nervous System. C. F. McClintic, M.D., Detroit.

Dec. 2—Arteriolar Changes in Hypertension, etc. E. T. Bell, M.D., University of Minnesota; Henry P. Wagener, M.D., Mayo Clinic.

Dec. 9—Chemiotherapy. Hugh McGuigan, M.D., University of Illinois.

Dec. 16—Malignant Tumors of the Head. Gordon New, M.D., Mayo Clinic.

Radio Broadcasts—WOI, Ames, 4:00 P. M. Fridays. WSUI, Iowa City, 8:00 P. M. Thursdays.

Oct. 7-20—Hypertension.

Oct. 14-27—Gall Bladder Disorders.

Oct. 21-Nov. 2—Colitis.

Oct. 28-Nov. 9—The Heart.

Nov. 4-16—Diet.

ANNUAL SESSION AMERICAN COLLEGE OF SURGEONS

The twenty-second annual Clinical Congress of the American College of Surgeons will be held in St. Louis, October 17-21, with headquarters at the Jefferson Hotel. Dr. Franklin H. Martin, director-general of the College, informs us that an instructive program of operative clinics has been prepared by the local Committee on Arrangements of which Dr. Evarts A. Graham is chairman.

Hospital standardization conferences under the direction of Dr. Malcolm T. McEachern will be held during the first four days. Four special programs have been prepared dealing respectively with fractures, curability of cancer, industrial medicine and traumatic surgery, and the teaching of surgery and the surgical specialties. Medical motion pictures will be on daily exhibition.

On Monday evening the president, Dr. Allen B. Kanavel, will present his retiring address, "Intangibles in Surgery," and turn over the robes of office to the incoming president, Dr. J. Bentley Squier, who will deliver his inaugural address, "Fundamentals of Specialism." The John B. Murphy oration in surgery entitled, "Pillars of Surgery," will be delivered by Sir William I. DeCourcy Wheeler, M.S., F.R.C.S.I., Dublin, Ireland.

On Wednesday evening a Community Health Meeting will be held with brief instructive talks dealing with personal health and hospital matters.

On Friday evening the convocation will be held for the incoming Fellows, and the Fellowship address on "Some New Things in Physics" will be delivered by Robert Andrews Millikan, Ph.D., LL.D., Sc.D., Nobel Laureate. Dr. J. Bentley Squier will deliver the presidential address entitled, "The American College of Surgeons—Twenty Years of Ambitious Effort."

Among the features of the evening meetings will be the oration on fractures by Dr. Philip D. Wilson and the oration on industrial medicine and traumatic surgery by Dr. Frederic A. Besley. A special program on ophthalmology and otorhinolaryngology will be held at the Statler Hotel and there will be clinics on these subjects during the entire week in the St. Louis hospitals.

Among the other foreign visitors will be Sir George Lenthal Cheatle, London, and Dr. José Goyanes, Madrid.

SOCIETY PROCEEDINGS

Cass County

Tuesday, September 13, the Cass County Medical Society met in Atlantic, for a dinner meeting at which time R. M. Sorenson, M.D., of Cumberland showed a four reel film on Traumatic Surgery of the Extremities. The next meeting will be held in Anita on October 11, and officers for the coming year will be elected.

Cerro Gordo County

The Cerro Gordo County Medical Society held its first regular meeting after the summer vacation, Tuesday evening, September 20, at the Eadmar Hotel in Mason City. Following a six-thirty dinner, N. C. Stam, M.D., presented a case of Pellagra, and Joseph H. Kinnaman, director of the Bureau of Maternal and Child Hygiene, presented the plan of the Bureau.

T. E. Davidson, M.D., Secretary.

Crawford County

The first fall meeting of the Crawford County Medical Society was held Tuesday, September 27, in Denison. After a six-thirty dinner at the Hotel Denison, the following program was presented: The Hygiene of Pregnancy, Chas. W. Pollard, M.D., professor of obstetrics, University of Nebraska, School of Medicine; Avitaminosis as a Likely Etiologic Factor in Polyneuritis Complicating Pregnancy, Ralph W. Luikart, M.D., Creighton University School of Medicine; General Considerations in the Field of Obstetrics, H. W. Clasen, M.D., Denison.

J. James Duffy, M.D., Secretary.

Des Moines County

The annual military medical meeting of the Des Moines County Medical Society was held Tuesday, September 13, in Burlington. Following the six-thirty dinner, Mr. F. E. Reimel, captain of the ordnance department at Rock Island, Illinois, spoke on the Third United States Division in the Second Battle of the Marne.

Dubuque County

Physicians from thirty cities and towns attended the Seventy-ninth Annual Meeting of the Dubuque County Medical Society held at the Finley Hospital in Dubuque, Thursday, September 15. The program was as follows:

Morning Session

The Finley Hospital, 10:00 A. M. Laboratory Building
Clinical Demonstrations

Cases of Multiple Sclerosis, Tabes Dorsalis, Encephalitis Lethargica, H. A. Stribley, M.D.; Cases of Rheumatic Fever and Chorea, Aortic Aneurysm, L. E. Cooley, M.D. (by invitation); Two Cases of Cataracts with End Results, Models Showing Development of

Modern Cataract Glasses, H. G. Langworthy, M.D.; A Case of Bilateral, Alternating Squint with End Result, J. A. Thorson, M.D.; A Case of Pneumococcus Peritonitis with End Result, A. B. Nesler, M.D.; A Case of Carcinoma of the Stomach with Unusual Symptoms, H. B. Hibbe, M.D.; A Case of Spontaneous Fracture of the Tibia, J. M. Walker, M.D.; A Case of Fracture—Dislocation of the Shoulder with End Result and a New Method of Treating Fractures of the Hip, D. C. Conzett, M.D.; Cases of (a) Pituitary Tumors, (b) Myeloma, (c) Foreign Bodies in Lungs and Trachea, (d) Orbital Abscess, H. E. Thompson, M.D.

Luncheon

Compliments of The Dubuque County Medical Society. The Finley Hospital, 1:00-2:00 P. M.

Afternoon Session

Nurse's Class Room

The Diagnosis and Treatment of Postoperative Pulmonary Complications (illustrated), Willard Van Hazel, M.D., Dept. of Surgery, University of Illinois; The Surgical Treatment of Skull Injuries and Fracture—Dislocations of the Spinal Column, Loyal Davis, M.D., Dept. of Surgery, Northwestern University; (a) Diseases of the Coronary Arteries, (b) Animated Picture of the Action of the Heart in Health and Disease, C. J. Lundy, M.D., Dept. of Electrocardiography, Rush Medical School, Chicago University.

Special Exhibits

Series of X-Ray Films Illustrating the Treatment of Tuberculosis at Sunnycrest Sanatorium, J. C. Painter, M.D.; Interesting X-Ray Films and Lantern Slides, H. H. Webb, M.D.; Unusual Pathologic Specimens with Clinical Abstracts, F. P. McNamara, M.D.

Lee County

More than seventy-five visiting doctors were in attendance at the meeting of the Lee County Medical Society in Fort Madison, Thursday, September 22. Beginning at one o'clock the following program was presented: Hypothyroidism, M. G. Means, M.D., Ottumwa; Infections of the Knee Joint, E. B. Hoeven, M.D., Ottumwa; Diagnosis of Tuberculosis, H. W. Vinson, M.D., Ottumwa; Pneumothorax, H. A. Spilman, M.D., Ottumwa. The session closed with a six o'clock dinner and impromptu program, during which Dr. Charles B. Taylor of Ottumwa, president elect of the state society, talked on activities of that organization.

Linn County

Thursday, September 8, the Linn County Medical Society met in regular session at the Hotel Roosevelt

in Cedar Rapids. Nathaniel G. Alcock, M.D., of the State University at Iowa City, gave a masterly address on the subject of One Year's Experience with Transurethral Prostatic Resections. This is the first report of this kind on record, and Dr. Alcock reported on 260 cases of this pioneer work. It was discussed by Drs. Entz of Waterloo, Hejinian of Anamosa, Schrup of Dubuque, Crawford and J. Hamilton of Cedar Rapids, and Lee of Iowa City. W. J. Neuzil, M.D., of Cedar Rapids, presented a paper on Coagulation of Tonsils, which was discussed by Drs. Stansbury and W. J. Foster of Cedar Rapids. A motion picture film on Cancer of the Skin, was also shown. There were 160 doctors and 60 nurses present at this meeting.

On September 29, the regular meeting was held at Independence, where R. A. Stewart, M.D., of the state hospital, presented cases on the four following conditions: Manic Depressive Psychosis, Paranoia, Dementia Praecox, and Neurosyphilis.

Louis W. Sauer, M.D., of Northwestern University will furnish the scientific program for the October 13 meeting of the society. His subject will be Feeding Problems, Including Pyloric Stenosis in Infancy, Anorexia in the Totter, and Malnutrition in the School Child. A paper on Trichomona Vaginalis will be read by Florence Johnston, M.D., of Cedar Rapids.

T. F. Hersch, M.D., Secretary.

Louisa County

J. L. Klein, M.D., of Muscatine, furnished the scientific program for the Louisa County Medical Society meeting held in Letts, Thursday, September 7, speaking on Traumatic Injury of the Hand, with two clinical patients for demonstration.

Madison County

The Madison County Medical Society held its annual meeting Monday, September 12, at the Winterset Hospital. After a dinner was served in the dining room of the hospital, the following officers were elected for the ensuing year: Dr. J. F. Veltman, of Winterset, president; Dr. G. J. Anderson of Winterset, vice president; Dr. C. B. Hickenlooper of Winterset, secretary-treasurer; Dr. I. K. Sayre of St. Charles, delegate; and Dr. Arnold L. Nelson of Winterset, alternate delegate. For the scientific program, Con. R. Harken, M.D., of Osceola, read a paper on The Specialties and General Practice, and Leslie Lamb, M.D., of Lorimor, read a very interesting paper on The Handling of Cancer by the General Practitioner.

C. B. Hickenlooper, M.D., Secretary.

Polk County

Regular monthly meetings of the Des Moines Academy of Medicine and Polk County Medical Society were resumed Tuesday evening, September 27 at the Hotel Fort Des Moines. Dr. James A. Downing read the report of the Committee on Credit Rating and announced that the report had been approved by the Council and would be put into effect immediately,

thus inaugurating a credit rating bureau in the society. The scientific program was presented by Floyd B. Langdon, M.D., and consisted of his paper on Labor Among Primitive People and in the Higher Animal Kingdom, and motion pictures entitled Labor Among Animals. The program was well received and attended by the largest number of members and guests for many months. Approximately one hundred and sixty physicians, nurses and other guests were in the audience. Following the program, many members remained to enjoy the pleasures and entertainment of a social hour.

Poweshiek County

When the members of the Poweshiek County Medical Society met Thursday, September 13, in Deep River as the guests of Drs. Crain and Crain, William F. Boiler, M.D., of Iowa City, presented a paper on The History of Syphilis.

Scott County

Gordon F. Harkness, M.D., of Davenport, was the speaker at a dinner meeting of the Scott County Medical Society held Tuesday, September 6. His subject was The Cost of Being Sick.

Washington County

Tuesday, September 6, the Washington County Medical Society held its annual chicken dinner at the Congress Hotel in Washington. Following the banquet, Oliver J. Fay, M.D., of Des Moines, who was the speaker of the evening, gave an address on Lincoln.

Woodbury County

The regular meeting of the Woodbury County Medical Society was held Thursday, September 22, in the ball room of the Martin Hotel in Sioux City. After a short business meeting, Howard I. Down, M.D., presented a paper, The Indications for the Treatment of the Complications of Peptic Ulcer.

Wright County

Thursday, September 15, the Wright County Medical Society met in Clarion at the Moore Hotel for a six-thirty dinner, after which C. B. Luginbuhl, M.D., of Des Moines, presented a paper on Diagnosis and Robert L. Parker, M.D., also of Des Moines, read a paper on Therapeutics.

Austin Flint-Cedar Valley Medical Society

The October meeting of the Austin Flint-Cedar Valley Medical Society will be held in New Hampton, Tuesday, October 11. The program is as follows: Chemotherapy and Histories of Some Interesting Cases, Frank W. Porterfield, M.D., of Waterloo; Medical Clinic, George B. Eustermann, M.D., Mayo Clinic, Rochester, Minnesota; Surgical Clinic, George M. Crabb, M.D., Mason City; Carcinoma of the Pancreas, J. H. Butts, M.D., Waterloo; The Responsibilities and Opportunities of the Practitioner in Deal-

ing with Organic Disease of the Upper Digestive Tract, Dr. Eustermann; Perforations of the Eyeball, Edward Novak, M.D., New Hampton; Hypothetical Neuropsychiatric Cases, Frank A. Ely, M.D., Des Moines; Paper by S. W. Barnett, M.D., Waterloo, subject to be announced later; Skin Clinic, Erwin Schenck, M.D., Des Moines. A dinner will be held at six o'clock, following the scientific program, at which Milford E. Barnes, M.D., of Iowa City, will deliver an address. Officers for the organization are: Dr. E. F. Stevenson of Waterloo, president; Dr. M. N. Guernsey of Waverly, vice president; Dr. C. C. Hall of Maynard, secretary; and Dr. W. E. Long of Mason City, treasurer.

Iowa Academy of Ophthalmology and Otolaryngology

Fifty active members attended the annual meeting of the Iowa Academy of Ophthalmology and Otolaryngology, held at the Hotel President in Waterloo, August 18. The meeting opened at 10:00 A. M. with President Royal French presiding. A very interesting program consisting of scientific discussions and case reports was presented by the resident members of Waterloo. A business meeting was held immediately following the luncheon. Election of officers for the coming year resulted in Dr. W. W. Pearson of Des Moines being named president; Dr. C. M. Werts, also of Des Moines, vice president; and Dr. W. F. Boiler of Iowa City, secretary. The organization adopted a constitution and by-laws and special emphasis was placed upon Sections one and two of Article III, which are as follows:

Article III—Membership

Section 1. Any legally registered physician, in active practice, in the state of Iowa, and in good standing with his or her county and state medical societies, and limiting his or her practice to diseases of the eye, ear, nose and throat, or any one or more of these specialties, is eligible to membership.

Section 2. Any physician meeting the requirements as set out in Article III, Section 1, may make application to the secretary, either in person or in writing. The secretary shall read the names of such applicants at the annual meeting. Applicants shall be voted upon by ballot, and three-fourths majority shall be necessary to elect. If favorably acted upon, the applicant becomes a member immediately upon the payment of the annual dues.

W. F. Boiler, M.D., Secretary.

AUXILIARY NEWS

Mrs. Freeman Feted While in City

Complimenting Mrs. Walter Jackson Freeman of Philadelphia, president of the Woman's Auxiliary to the American Medical Association, the Board of Directors of the Woman's Auxiliary to the Iowa State Medical Society held a business meeting at 10:30 A. M. in Younkers Tearoom, followed by a 1 o'clock luncheon for the eastern guest. The Board includes Mrs. P. B. McLaughlin of Sioux City, president; Mrs. W. A. Seidler of Jamaica, president-

elect; Mrs. C. W. McLaughlin of Washington, first vice president; Mrs. James C. Donahue of Centerville, second vice president; Mrs. James A. Downing of Des Moines, third vice president; Mrs. P. W. Beckman of Perry, fourth vice president; Mrs. Wilbert W. Bond of Des Moines, secretary; Mrs. William Jepson of Sioux City, treasurer; Mrs. M. N. Voldeng of Woodward, Mrs. Channing G. Smith of Granger, Mrs. E. L. Bower of Guthrie Center, Mrs. G. E. Harrison of Mason City, Mrs. Thomas A. Burcham of Des Moines, Mrs. Oliver J. Fay of Des Moines, Mrs. Ralph Parker of Des Moines and Mrs. J. E. Kessell of Des Moines.

The luncheon was followed by a musical tea at 3:00 o'clock at the home of Mrs. Fred L. Wells. The tea also honored Mrs. McLaughlin of Sioux City, who was the guest of Mrs. Wilbert Bond. While in the city, Mrs. Freeman was the house guest of Mrs. Thomas A. Burcham, president of the Polk County unit. A short musical program was in charge of Mrs. Rodney P. Fagan, secretary of the Polk County Auxiliary. Mrs. Leslie M. Nourse presented Miss Margaret Corbin, vocalist, and Miss Juliette Redfern, pianist, in a program. Both young women and Mrs. Nourse are from the Drake Conservatory of Music.

INTERESTING NEWS

In Brief

It cost the state of Iowa \$88,583.19 for the care and treatment of approximately 3,000 indigent cases at the State University of Iowa Hospitals during August.

Available statistics seem to indicate that there is a continued rise in the mortality from diabetes, the rate now being well in excess of that observed previous to the discovery of insulin.

The drift of medical school graduates into specialized fields has apparently been checked since 1926. The percentage becoming specialists is no greater this year than for the preceding eight years.

The records of the State Department of Registration and Education in Illinois indicate that during the past year 627 cases of medical quackery were investigated with 42 convictions and 55 cases still pending.

The illness of Mrs. William E. Borah, wife of the Idaho senator, has recently brought to popular attention the disease of psittacosis, or parrot fever. So far, according to records available, Iowa has escaped this disease.

A news item which might appropriately have been headed, "Like Mother, Like Daughter," announces that the daughter of Madame Curie, of radium fame, has discovered a new particle of matter called the neutron.

In conferring an honorary fellowship upon Rear Admiral Charles E. Riggs, surgeon general of the United States Navy, the American College of Dentists deviated from their time-honored custom of limiting this honor solely to members of the dental profession.

If the practice initiated by the Sioux County Board of Supervisors becomes prevalent, physicians may benefit materially from the action. Last week in Sioux County the names of all persons receiving aid from the Poor Fund, and the amounts received were published.

Challenging the methods of the medical practitioner "in unnecessary and superfluous specialistic expenditures and hospitalization," Dr. A. J. Rongy, chairman of the Greater New York Committee, has recently attempted to fix the cause for the high cost of medical care.

Since the World War the government has spent approximately six billion dollars for the medical treatment of former service men. Seventy-seven per cent of the veterans receiving aid are said to have contracted their ailments since their discharge from military service.

Recently the Cleveland Clinic has been able to settle for a sum of \$167,000 all damage suits filed against the institution as a result of the Cleveland Clinic disaster (explosion which occurred May 15, 1929, in which 125 persons were stricken fatally by poison gases or burned).

Physicians of England, appreciating the fact that unemployed men do not maintain physical and mental health, have organized a camp for such unemployed men where they hope to keep these men physically and mentally fit so that they may again reenter employment when opportunity presents itself.

A recent communication from a New York physician seeking employment in Iowa would indicate that after all Iowa physicians have much for which to be thankful. "Conditions are so bad (in New York City)—worse every day—that nearly 500 physicians work as taxicab and truck drivers."

Celebrating his 52 years of active practice, Dr. S. T. Shelly at Mulvane, Kansas, recently gave a birthday party to some 4,300 children, the guests all being babies whom he had helped to usher into the world during his long years of practice. The oldest "baby" was 52 years old, and the youngest were six weeks' old twins.

A special committee of the Polk County Medical Society, cooperating with the Family Social Service, has reported that according to best standards the charity dollar for foods should be spent as follows: Twenty-five cents for milk, 20 cents for vegetables,

20 cents for cereals, bread and beans, 20 cents for fats and sugars, and 15 cents for eggs, meat, fish and cheese.

Dr. Ellice McDonald of the Pennsylvania Graduate School of Medicine recently reported that by means of a fluid injected into a patient's body explosive internal emanations are released when the individual is subjected to the systeming radiation of x-rays. He postulates that this discovery will have a material bearing upon the future treatment of cancer.

In sharp violation of the time-honored and world-established custom that physicians, particularly those in positions of prominence, remain inactive in the furtherance of political campaigns, it has just been announced that Dr. Herman Louis Kretschmer, president of the Chicago Medical Society, has accepted the position as chairman of the National Hoover-Curtis Physicians and Surgeons Committee.

Assailing the government's recent stand in the hospitalization of diseased veterans, William C. Woodward, representing the American Medical Association, is reported to have said, "Government competition of this character will tend to undermine the morale of the medical profession, hinder its development and leave the people without adequate medical resources in case of military necessity."

PERSONAL MENTION

Dr. E. D. Russell, who for fifteen years has practiced medicine at Fort Dodge, is leaving to locate in McGregor.

Dr. C. F. Starr of Mason City, addressed the local P. T. A. organization, Thursday, September 22, on "Safety and Health."

Dr. A. V. Hardy, head of the department of hygiene at the State University of Iowa, will speak before the Ottumwa Hygiene Club, October 12, on "Education for Health."

Dr. Daniel J. Glomset of Des Moines, has been appointed director of the Des Moines Health Center to succeed the late Dr. Alexander D. McKinley, who died July 9.

Dr. Thomas D. Wright of the Newton Clinic was the speaker at the noon meeting of the Newton Kiwanis Club, held August 24. Dr. Wright spoke on "Internal Glands."

Dr. R. J. Stephen, formerly of Malcolm, is now located in Ottumwa, and is associated in an exclusive eye, ear, nose and throat practice with Dr. A. B. Fair of that city.

Dr. E. D. Plass of Iowa City, was named president elect of the Central Association of Obstetricians and Gynecologists at the annual convention held in Memphis, Tennessee, September 16.

Dr. W. H. Green of Fontanelle, will close his office there on the first of October, and open one in Bridge-water to fill the vacancy caused by the removal of Dr. R. M. Chapman to Cedar Rapids.

Dr. Walter C. Abbott, neurologic surgeon of Des Moines, as an invitation speaker will address the American College of Surgeons at their meeting in St. Louis on Wednesday, October 19.

Dr. F. C. Suggett, Des Moines County health director, addressed a meeting of the leaders of the King's Daughters circles of the county, September 19, speaking on "Health Unit and Clinic Work."

Dr. Leroy Catterson of Oskaloosa, spoke before the registered nurses from the Second Iowa District, Saturday, September 10, at Burlington, on the subject of "Cardiac Conditions, Particularly in Relation to the Thyroid."

Dr. George A. Paschal is opening an office in Stratford, for the practice of medicine and surgery. Dr. Paschal was graduated from the State University of Iowa College of Medicine in 1929, and completed his internship there.

Dr. Thurlow M. Jewell, formerly of Coon Rapids, has moved to Des Moines and established an office at 634 East Grand Avenue. Dr. Jewell, before locating at Coon Rapids was a staff member of the Cook County Hospital, Chicago.

Dr. F. L. Nelson of Ottumwa, attended the eleventh annual convention of the American Congress of Physical Therapy, held in New York recently and presented an address on "Surgical Diathermy in Malignant Tumors of the Bladder."

Dr. Leonard West of Des Moines, who has the rank of captain in the Medical Reserve Corps, spent two weeks in September on active duty as a Flight Surgeon, at Marshall Field, Fort Riley, Kansas, being ordered there with the 314th Observation Squadron.

Dr. Jacob Kulowski, associate in orthopedic surgery at the University of Iowa, presented an illustrated lecture on the accomplishments of the orthopedic department at the Children's Hospital, at the regular Rotary Club meeting, held in Iowa City, September 14.

MARRIAGES

Saturday, October 1, Miss Helen Louise Fay, daughter of Dr. and Mrs. Oliver J. Fay of Des Moines, was united in marriage to Dr. William O. Purdy, son of Dr. C. L. Purdy of Brodnax, Virginia. The wed-

ding took place at the home of the bride's parents in Des Moines. Dr. Purdy was graduated from the University of Virginia Medical School, served his internship at the Iowa Methodist Hospital in Des Moines, and has been engaged in the practice of medicine in Des Moines for several months.

Miss Margaret Helt of Burlington became the bride of Dr. Charles Obermann of Iowa City, in a quiet and informal morning ceremony held at the home of the bride's mother in Burlington, Thursday, September 1. Dr. Obermann was graduated from the University of Iowa College of Medicine in 1930, and is now assistant in the department of neurology at the University Hospitals.

The wedding of Miss Mary Clare Cownie, daughter of Mr. and Mrs. John H. Cownie of Des Moines, and Dr. Richard O. Pfaff, son of Mr. and Mrs. W. W. Pfaff of Council Bluffs, took place Wednesday, September 14, in Des Moines. After a two weeks' wedding trip in Canada, Dr. and Mrs. Pfaff returned to Des Moines, where Dr. Pfaff is engaged in the practice of medicine.

Thursday, September 15, the marriage of Miss Elma Lister of Pulaski and Dr. C. D. Fenton of Bloomfield, took place in Lancaster, Mo. They will live at Bloomfield, where Dr. Fenton has just recently established himself in the practice of medicine.

Miss Fern J. Dodd of Traer was united in marriage to Dr. Clifford A. Fratzke of Waterloo, Saturday, August 27, at the home of the bride's parents in Traer. After a short wedding trip the young couple will go to Blockton, where Dr. Fratzke expects to locate and open an office for the practice of medicine.

DEATH NOTICES

Chesire, Matthew, U., of Marshalltown, aged sixty-two, died September 23 as the result of chronic heart disease and complications. He was graduated in 1897 from Rush Medical College, and at the time of his death was a member of the Marshall County Medical Society.

Evans, Robert, of Fort Dodge, aged seventy-five, died September 16 after a sudden heart attack. He was graduated in 1888 from the Detroit College of Medicine and Surgery and at the time of his death was a life member of the Webster County Medical Society. (A more complete obituary will be found in the History of Medicine Section.)

Park, William Martin, of Indianola, aged seventy-nine, died September 1 of angina pectoris. He was graduated in 1876 from the College of Physicians and Surgeons, Keokuk, and at the time of his death was a life member of the Warren County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. McCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

A Graceful Tribute to a Former Iowa Physician

In an interesting article on "The Social Training of the Surgeon and Physician," by Dr. William J. Mayo,¹ appears the following tribute to a former well known Iowa physician and teacher, the late Dr. Woods Hutchinson:

"As one attempts to estimate the measure of success that has come to members of the medical profession, one finds that success depends more on the imponderables than on those things which can be weighed and measured. In such a consideration, it is natural to think particularly of one's classmates in university days and what professional success came to them with the years.

"There were three men in my class with whom I was very closely associated. Two of them were my seat-mates: Franklin P. Mall² and Woods Hutchinson.³

"Mall was frail looking, and was always trying to harden himself physically; he walked out on the coldest days across the campus without an overcoat, but sometimes conceded a scarf around his neck. He had a keen mind and was devoted to the science of medicine, but even in those early days his interest in the art of medicine was less manifest. After graduating from the University of Michigan, he went abroad and studied in the Teutonic countries. Especially interested in anatomy, he became one of the great leaders in anatomic investigation and research, and eventually held the chair of anatomy at Johns Hopkins Medical School.

"Mall had an analytical mind, and was a sound student. He correctly evaluated the fundamental relationship which connects anatomy so closely with physiology, because he early recognized that, after all, physiology is the architect, and anatomy the master builder which furnishes the structures in which physiologic processes work. He pointed out that the heart of the portal circulation is the intestinal tract contracting rhythmically seventeen or eighteen times to the minute, pumping the blood to the liver, and that this contraction is en-

tirely separate from the peristalsis which occurs once or twice to the minute.

"Although Mall was not much interested personally in teaching, he saw that the medical students were well taught, leaving the bulk of their training in other competent hands.

"In the years after graduation from Michigan, I met Mall occasionally. He had the happy life of an academic man who is interested in what might be called the finer things in medicine rather than in the material rewards of financial character. He died November 17, 1917.

"Woods Hutchinson I knew equally well. He was a nephew of Jonathan Hutchinson of London, a remarkable man, who was conceded to be the most learned English surgeon of his day, not only well versed in surgery, but profoundly erudite in other branches of medicine. Jonathan Hutchinson was especially interested in dermatology, and because of his researches into syphilis, the peculiar teeth of those who had congenital syphilis were given the name of Hutchinson's teeth.

"Woods Hutchinson was a tall man, with a long face and reddish hair, humorous, with a philosophical mind. Even as I knew him in medical school, he was recognized by members of the class as a queer individual who had more real knowledge of the things concerned with the fundamentals of medicine than any other man in the class. He was a clear thinker, and possessed not only an enormous wealth of knowledge but a breadth of knowledge as well.

"Essentially an intellectual aristocrat, in neither his professional training nor in his social contacts could he bring himself to a level lower than his own. He was devoted to his profession, anxious to help, generous, conscientious, but he lacked that something which enabled him to practice medicine successfully. As he changed from one locality to another, he was always recognized as the most learned man in the medical societies that he attended, interested in the science of medicine but

not in the art, interested in sociology in a large sense, but not in the individual. Yet he accomplished a great work. His pen was facile, and he became one of the best known writers in the world for the benefit of the public on medical subjects. Those who read his articles as published especially in the *Saturday Evening Post* and other periodicals, were struck with his vast information on collateral subjects which had a bearing on medicine. From these articles the physician got much useful information, and yet it was so simply presented that it came within the range of the untrained readers of the general public. Few men have been gifted in this way. My brother, Dr. Charles H. Mayo, is one such.

"Until Dr. Hutchinson died, April 26, 1930, I had more or less frequent contacts with him.

"Here is a man greatly interested in medicine in a broad form in its relations to mankind, but not especially interested in the patient as an individual. Yet his life, measured by any standard, was a success, not materially, because he did not accumulate any large amount of property, but a success, inasmuch as those remarkable talents which he possessed helped the cause of medicine in caring for the sick.

"The third man of whom I wish to speak we will call 'X.' 'X' was considered the brightest and most promising man in our class, a handsome young fellow with a fine personality, clever, quick, a keen student, and with that unconscious genius for social contacts which we sometimes see. 'X' had everything, as I look back on it, except what may be defined as a spiritual quality. I remember in the earlier years after graduation of hearing through some of my classmates how extraordinarily well he was doing in the practice of medicine and surgery.

"About fifteen years after graduation, at a meeting of the American Medical Association, a few of us got together, as classmates will, 'X' among us, and we discussed the interesting things that had happened to each of us since we had entered practice. I was much struck with the enormous success that had come to 'X.' He was doing a great deal of surgery. And yet, as I thought about it, I was a little bothered at the number of movable kidneys he had found it necessary to fasten, and the relatively large number of ovaries on which he had found it expedient to do plastic or other operations. My real shock came when several of us were talking about how necessary it was to get postmortems, that we might learn the truth in order to be better prepared for the future. After we had all talked a bit, 'X' said, with rather a cunning look on his face, or so I remember it, 'Well, do you know,

there has never been a postmortem made on any patient I have operated on and lost. We all make mistakes, but I take mighty good care that nobody knows about mine.'

"The meeting of the American Medical Association in question was held near the town in which 'X' practices, and between trains I had stopped and visited with him, and met his wife and children. His wife was a rather frail, refined looking woman. I did not see him again for a good many years, but finally having occasion to change trains at the city where he practiced, on my way to a meeting, I went to call on him. The site of his rooms was the same, but in some respects the office was very different. In the patient's waiting room was a large showcase filled with surgical instruments; an apparatus with a great many different colored bottles for spraying into the nose and throat, an electric machine, and no patients. I asked him how he was getting on. He said the people had no sense; an osteopath and chiropractor had come to town, and the people knew no better than to go to them; they were doing a big business. The regular medical practitioners in town, he said, were not much account and were on poor relations with each other. All together it was evidently through a lack of intelligence on the part of the people and the general 'cussedness' of the other physicians that things were not going as well as they might. I asked him about his wife and family. He was somewhat embarrassed.

"Some time ago 'X' came here as a patient, accompanied by one of his sons. He had generalized arteriosclerosis, and was in rather an unhappy condition. Not long afterward the son wrote me of his father's death.

"It is easy enough to moralize, but when I think of this man, who had all the qualities that go to make a satisfactory career in the practice of his art and an enviable reputation in the profession and among his townspeople and yet who failed, as I thought, in true success, I pondered. Not dishonest, but using cleverness rather than wisdom, exploiting the success of the minute, putting the material side of his own desires before the interest of the patient, he began finally to play the game of the quack and the irregular practitioner and was beaten at their game.

"We can only say that he lacked moral fiber. Yet as I think it over, it seems rather the lack of emotional intelligence, if one may speak of it as such; that is, those emotions which are founded on basic social understanding, for which he had so much contempt, had ruined his career. He left considerable property, had been a stockholder in various banks, but as compared with

the careers of Franklin P. Mall and Woods Hutchinson, his life had been a disappointment."

References

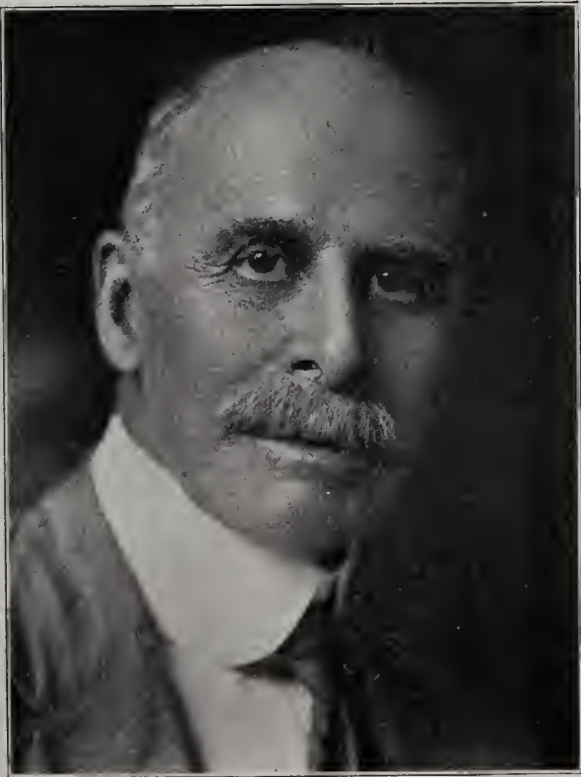
1. Proceedings of the Staff Meetings of the Mayo Clinic, March 30, 1932.
2. Born at Belle Plaine, Iowa, 1862. Professor of Anatomy, Johns Hopkins University, 1893-1917.
3. Editor *Vis Medicatrix*, Des Moines, 1890-1892, Professor of Anatomy, Medical Department, State University of Iowa, 1891-1897.

DR. ROBERT EVANS

1857-1932

Dr. Robert Evans, of Fort Dodge, died September 17, 1932, at 11 p. m. in his own home. He was in his usual health and had been in bed but arose and went down stairs for something. On his way back to bed he fell on the stairs, in a heart attack, and died immediately.

Dr. Evans was born in Seaforth, Ontario, Canada, April 7, 1857, and spent his boyhood on an Ontario



DR. ROBERT EVANS

farm. He attended the public schools, took college work, and taught school for a few years. He then took up the study of medicine and was graduated from the Detroit College of Medicine in 1888. He located first in La Crosse, Wisconsin, and practiced there for several years, then moved to Fort Dodge in 1891, and practiced there until May, 1932, when he retired from active practice. At the time of his retirement, his colleagues gave him a banquet which drew his medical brothers from all over the state.

He was married to Miss Mercie Thompson in 1896, who died last Christmas Eve. They had no children, but raised and educated two of his wife's nieces. His devotion and consideration of Mrs. Evans at all times and all places was most striking; it amounted almost to reverence.

He early took up surgery when modern surgery was new, and was a most assiduous student of both medicine and surgery. For twenty-five years it was his custom to spend some weeks in postgraduate work and visiting the great clinics. Johns Hopkins was his favorite and he held the friendship of most of the famous teachers there, Osler, Halstead, Young, Kelly, Cushing, and others. In 1908 he made a trip to Europe, spending some months in visiting the great clinics. There is probably no man in Iowa who has as thorough a knowledge of the medical literature as Dr. Evans, and he carried in his mind an index of all that he read and that index, his memory, was marvelous. One could ask him any question on any unusual phase of medicine and he would ponder a few minutes, then go to the book shelves of his excellent library, take down a book and bring it to you open where there was a good article on that subject.

He was always an active participant in the activities of the county society, and the hospital staff. He was president of numerous medical societies, among them the Twin Lakes Medical Society and the Missouri Valley Medical Society and at the time of his death was president of the Iowa Clinical Surgical Society. He was a life member of the Iowa State Medical Society, a member of the American Medical Association and a fellow of the American College of Surgeons. During the war he was chairman of the Webster County Exemption Board and had more to do with the examinations of recruits than any other man.

In religion he was a Roman Catholic, but he was more than that; he was catholic in its broadest sense, meaning universal. He knew his religion as few do. He understood and could explain in simple words, obscure and difficult points of the Catholic doctrine. He knew church history well and practiced his religion every day of the week, not merely on Sundays, but withal, he was tolerant and sympathetic with all other sects and numbered a host of non-Catholics as his friends, among them many ministers. He was able to see usefulness and good in religions other than Christian, such as the Jewish and the Mohammedan, especially the Moslem Arabs, and gave them full credit for their contributions to mathematics and science, and particularly to medicine, greatly admiring their universities and schools established wherever there was Moslem control and open to laymen of all faiths and creeds.

Dr. Evans was a true physician, not only for his knowledge and skill but for his personality. His manner in the sick room was a model for all physicians, and the few words he would say always inspired faith, trustfulness and confidence in him and hopefulness for the outcome. One of our nurses put it well when she said, "I would want Dr. Evans for

my doctor because he is always there with the consolation." He was a superb consultant, always smoothing things out for the attending doctor and restoring the patient's confidence. If conditions looked bad, he would always see the bright side and give some reason why there might be betterment. The reason he gave might not even be good, but it made the attending doctor and patient feel better to hear it. Optimism was with him always. He was especially good to young physicians and his office was their common meeting ground.

He had a great sense of humor and saw the funny part of every incident. That was really his support in times of stress and trouble. He loved to sit around with a few friends and visit. When once you could get him started, he would entertain a few friends half a night telling stories and anecdotes, and those stories were always funny or pathetic incidents in his own experiences.

It was simply impossible for him to do a dishonest or dishonorable thing, or to do anything that would make anyone feel badly. He was a grand old man and well deserved his title "The Dean of Fort Dodge Doctors."

W. W. Bowen, M.D.

DOCTOR ROBERT EVANS

An Appreciation From the Webster County Medical Society

With the death of Robert Evans, M.D., on September 16, 1932, there passed from the fellowship of the medical profession of Fort Dodge, Iowa, one of its most valued friends and counselors.

The Webster County Medical Society, the Staff of St. Joseph's Mercy Hospital and the Staff of the Fort Dodge Lutheran Hospital have all lost a most valuable and learned member.

For forty-five years Doctor Evans stood as a leader and a most respected physician and surgeon in this community. He was always willing and ready to lend a helping hand to further the advancement of medical science in any and every way. Because of his travels, attendance at clinics and constant reading of medical literature, he was always found abreast of the times.

By his placid even tempered disposition and unlimited cooperative spirit, he has left a vacancy in our organizations most difficult to fill. His friendship will be a treasured memory of every member of these organizations.

It is recommended that this tribute of regard for Doctor Evans from the Webster County Medical Society, the Staff of St. Joseph's Mercy Hospital and the Staff of the Fort Dodge Lutheran Hospital be recorded in their minutes and that a copy be forwarded to his family as well as to the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Committee:

H. W. Scott, M.D.
John C. Shrader, M.D.

FRANK BILLINGS, M.D.

1854-1932

An Appreciation

Many Iowa friends were saddened by the news of the death of Dr. Frank Billings in Chicago on September 20.

As a teacher for fifty years in two university medical schools, Northwestern and Rush Medical College, University of Chicago, two generations of his students were located in every section of the state.

Until very recently hardly a year passed that he did not appear on an Iowa medical program. One of his last visits was the occasion of the annual meeting of the Iowa State Medical Society at Des Moines in 1924. He also appeared on the clinical program of the Inter-State Postgraduate Assembly when it met in Des Moines in 1923.

His teaching and clinical demonstrations were distinguished by the emphasis on physical methods of examinations, the application of the natural senses, and the careful analysis of subjective and clinical phenomena. While most appreciative of the value of modern laboratory aids in diagnosis, he endeavored to show on every occasion to what an extent a diagnostic conclusion could be made without them.

He was at all times the constant champion of the general practitioner, the family physician, and recognized his important place in the advancement of medical knowledge and its relation to human science.

Dr. Billings was an inspiration to students, internes and the young practitioner. It is estimated that more than a hundred of the leading medical teachers and clinicians throughout the country bear the stamp of his stimulating personality. During the world war six of his former assistants were chief medical officers in the different military cantonments.

The medical life of Frank Billings is the story of medical progress and achievement of the last half century. He influenced medical education to a remarkable degree, and extended the prestige of American medicine far afield. It was a life devoted to the best in medicine in all its human relationships. Physically and mentally he belonged to the giants of the earth. His friendliness, genial spirit, and manly virtues endeared him to his colleagues and friends.

Walter L. Bierring.

MILITARY TRAINING COURSE

The medico-military course of inactive duty training for Medical Department Reserve officers, which has been held at the Mayo Clinic during the past three years, will again be held this year from October 16 to 29, both dates inclusive. This inactive duty training will follow the plan so well worked out under the auspices of Colonel George A. Skinner and the military features will be under his personal supervision.

Application for this course of inactive duty training should be made either to the director of the Mayo Foundation, Rochester, Minnesota, or to the Corps Area Surgeon, Seventh Corps Area, Omaha, Nebraska.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***CERTIFIED MILK**—Proceedings of 1931 Annual Conference of American Association of Medical Milk Commissioners, and Certified Milk Producers Association of America, and Metropolitan Certified Milk Producers.
- ***THE COSTS OF MEDICINES**—The Manufacture and Distribution of Drugs and Medicines in the United States and the Services of Pharmacy in Medical Care.—(Publications of the Committee on the Costs of Medical Care; No. 14)—By C. Rufus Rorem, Ph.D., and Robert P. Fischelis, B.S., Ph.D.—The University of Chicago Press, Chicago, 1932.—Price, \$2.50.
- ***DIABETES IN CHILDHOOD AND ADOLESCENCE**—By Priscilla White, M.D., Physician at the New England Deaconess Hospital, Boston.—With a Foreword by Elliott P. Joslin, M.D., Clinical Professor of Medicine, Harvard Medical School.—236 pages, illustrated.—Lea & Febiger, Philadelphia, 1932.—Price, \$3.75.
- ***DISEASES OF THE CORONARY ARTERIES (MYOCARDITIS)**—By Don C. Sutton, M.D., Associate Professor of Medicine, Northwestern University; and Harold Lueth, M.D., formerly Instructor in Physiology, Northwestern University.—164 pages, illustrated.—The C. V. Mosby Company, St. Louis, 1932.—Price, \$5.00.
- ***ELECTROSURGERY**—By Howard A. Kelly, M.D., LL.D., F.A.C.S., Baltimore, Maryland, and Grant E. Ward, M.D., F.A.C.S., Baltimore, Maryland. 305 pages with 382 illustrations by William P. Didusch and others. Philadelphia and London: W. B. Saunders Company, 1932, Cloth, \$7.00 net.
- THE HEALING CULTS**—A Study of Sectarian Medical Practice; Its Extent, Causes and Control—By Louis S. Reed, Ph.D.—(Publications of the Committee on the Costs of Medical Care; No. 16)—The University of Chicago Press, Chicago, 1932.—Price, \$2.00.
- AN INTRODUCTION TO DERMATOLOGY**—By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin.), Professor of Diseases of the Skin, University of Kansas School of Medicine, and Richard L. Sutton, Jr., A.M., M.D.—Visiting Dermatologist to the Kansas City General Hospital.—565 pages, with 183 illustrations.—The C. V. Mosby Company, St. Louis 1932.—Price, \$5.00.
- THE MEDICAL CLINICS OF NORTH AMERICA**.—New York Number, Vol. 15, Number 5, March, 1932. Published by W. B. Saunders Company, Philadelphia & London.
- * Book Review in this issue.
- MODERN GENERAL ANESTHESIA**—James G. Poe, M.D., Second Edition, Completely Revised and Enlarged.—231 pages with 12 illustrations and 2 charts. F. A. Davis Company, Philadelphia, 1932.—Price, \$2.50.
- PAIN IN THE PLEURA, PERICARDIUM AND PERITONEUM**—A Clinical Study.—By Joseph A. Capps, M.D., Professor of Clinical Medicine, University of Chicago; with the collaboration of George H. Coleman, M.D., Assistant Professor of Medicine, Rush Medical College; a foreword by Anton J. Carlson, M.D., Ph.D., Chairman of the Department of Physiology, University of Chicago.—99 pages, illustrated.—The MacMillan Company, New York, 1932.—Price, \$3.00.
- PATHOLOGY FOR NURSES**—By Eugene G. Piette, M.D.—251 pages, with 65 illustrations.—F. A. Davis Company, Philadelphia, 1932.—Price, \$1.75.
- THE PRACTICAL MEDICINE SERIES—General Surgery**. Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine.—Series of 1931.—The Year Book Publishers, Chicago.—Price, \$3.00.
- THE PRACTICAL MEDICINE SERIES—General Therapeutics**, Edited by Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, M.D., Instructor of Medicine, University of Illinois College of Medicine.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, \$2.25.
- THE PRACTICAL MEDICINE SERIES—Neurology**, Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College.—*Psychiatry*, Edited by Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado Medical School.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, \$2.25.
- THE STORY OF MEDICINE**—From Medicine Man to Modern Physician. By Victor Robinson, M.D., Professor of History of Medicine, Temple University School of Medicine, Philadelphia. Albert and Charles Boni, New York, 1931. Price, \$5.00.
- A TEXT-BOOK OF CLINICAL NEUROLOGY**—Clinical neurology, Columbia University, New York; attending neurologist, Neurological Institute and The Montefiore Hospital, New York City. Second edition, revised. Seven hundred fifty-nine pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$7.00 net.

BOOK REVIEWS

CERTIFIED MILK

Proceedings of 1931 Annual Conference of American Association of Medical Milk Commissioners, and Certified Milk Producers Association of America, and Metropolitan Certified Milk Producers.

Questions of pasteurization and irradiation of milk, the increase of vitamin content by proper feeding of cows, the struggle against *Bacillus abortus*, and tuberculosis infection are discussed by pediatricians, laboratory investigators, dairy commissions and producers. Reports are published from milk commissions of various county medical societies throughout the country.

Methods and standards for production of certified milk are adopted by the American Association of Medical Milk Commissions. In reading these addresses and reports, one is impressed by the serious and concerted efforts on the part of both the physicians and milk producers of America to make available a pure, clean, and safe milk for infant feeding.

This published report can be obtained from the Iowa State Medical Library. J. E. D.

THE COSTS OF MEDICINES

The Manufacture and Distribution of Drugs and Medicines in the United States and the Services of Pharmacy in Medical Care.—(Publications of the Committee on the Costs of Medical Care; No. 14)—By C. Rufus Rorem, Ph.D., and Robert P. Fischelis, B.S., Ph.D.—The University of Chicago Press, Chicago, 1932.—Price, \$2.50.

Perhaps in no field of medical service is it more difficult to disentangle the complex professional and commercial interests involved than in the manufacture and distribution of medicines. For this reason the author of this volume prepared under the direction of the Committee on the Costs of Medical Care, has been presented with an unusual problem, and it would appear from the report which is embodied in this volume that the problem has been adequately met. It is pointed out that the American people spend approximately \$715,000,000 a year for drugs and medicines. Of this amount, \$190,000,000 purchases drugs prescribed or dispensed by physicians. The

remaining amount is spent for "home remedies" or patent medicines.

The authors believe that the personnel and facilities for compounding and distributing drugs and medicines are adequate, but consider that governmental regulation and control of the drug industry should be strengthened. One of the major recommendations in this report calls for compulsory disclosure of the composition of all medicines.

"The hope for better public control of the medicine industry appears to lie in the direction of an enlightened public opinion brought about by educational efforts."

DIABETES IN CHILDHOOD AND ADOLESCENCE

By Priscilla White, M.D., Physician at the New England Deaconess Hospital, Boston.—With a Foreword by Elliott P. Joslin, M.D., Clinical Professor of Medicine, Harvard Medical School.—236 pages, illustrated.—Lea & Febiger, Philadelphia, 1932.—Price, \$3.75.

The conquest of diabetes in children is one of the outstanding medical accomplishments of the last ten years. Before the discovery of insulin the mortality of diabetes in children was nearly 100 per cent. Today it is 7 per cent and is rapidly nearing the vanishing point.

This volume is of unusual interest and has a background of authority, which renders it immediately pre-eminent in the field. The author has served in Dr. Joslin's clinic for many years, and has given especial attention to the treatment of diabetes in childhood and adolescence. Through the facilities of the clinic she has been able to watch the growth and development of these children and follow them in their later medical history through adult life. It presents facts rather than speculations, and includes data which point the way to the conquest of coma and arteriosclerosis through their indefinite postponement.

Since the knowledge derived from the treatment of the diabetic child furnishes a background for the scientific management of all cases of diabetes, every physician who encounters this disease in his practice will profit by a careful study of this volume. The chapters dealing with treatment, especially the insulin treatment of these juvenile diabetics, will be of particular interest to those physicians limiting their work to the consideration of metabolic diseases.

DISEASES OF THE CORONARY ARTERIES (MYOCARDITIS)

By Don C. Sutton, M.D., Associate Professor of Medicine, Northwestern University; and Harold Lueth, M.D., formerly Instructor in Physiology, Northwestern University.—164 pages, illustrated.—The C. V. Mosby Company, St. Louis, 1932.—Price, \$5.00.

Vital statistics today indicate that deaths from

cardiac disease exceed all others. It is, therefore, timely that one thoroughly versed in cardiology should present in biographic form an epitome of the literature and researches which have been conducted concerning the symptomatology, pathology and etiology of myocardial disease.

In this monograph the author has considered all structural changes of the heart as productive of a degeneration of the heart muscles, which in turn causes the objective symptomatology. He has drawn to a generous degree from his own wealth of experience and from his own laboratory experiments so that this treatise reflects the general concept of myocardial disease viewed in terms of clinical entities, and modern research. It is interesting to note that in the formation of the volume the author introduces his subject by discussing symptomatology, and later presents the anatomy and pathology as introductory to a discussion of the physiology and treatment of the conditions. This arrangement would appear entirely logical, especially when we consider that the entire subject has been written primarily with the view of its applicability to bedside practice.

ELECTROSURGERY

By Howard A. Kelly, M.D., LL.D., F.A.C.S., Baltimore, Maryland, and Grant E. Ward, M.D., F.A.C.S., Baltimore, Maryland. 305 pages with 382 illustrations by William P. Didusch and others. Philadelphia and London. W. B. Saunders Company, 1932. Cloth, \$7.00 net.

During the past decade there has been, probably, no greater contribution made to surgical practice than the introduction of electrosurgery as an adjunct to surgical practice. Many medical practitioners have gained a passing knowledge of these methods, but it has not been possible for any of them to secure a broad survey of the entire field, except through personal attendance at the various clinics where these methods have been introduced and employed, or through a very extensive perusal of all the current surgical literature.

It is, therefore, timely that an eminent group of authorities should collaborate in the production of a treatise, which for the first time presents the entire subject of electrosurgery in one volume. Here we find presented in detail the practical steps of applying electrosurgery in diseases of the skin, oral cavity, in otolaryngology, in lesions of the thyroid, thorax, breast, abdomen, in gynecology, urology, bladder tumors, proctology, the central nervous system, closing with a special chapter on the separate and joint use of irradiation and electrosurgery. This monograph appears to cover the field with great thoroughness and in sufficient detail so that the average surgeon will have no difficulties in mastering the methods presented.

Especial attention is directed to the numerous and well executed illustrations, which so handsomely illuminate the text. The volume bears our unqualified recommendations to every physician employing surgical methods.

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No. 11

THE DIAGNOSIS AND TREATMENT OF CANCER OF THE LARYNX*

WILLIAM V. MULLIN, M.D.
Cleveland Clinic, Cleveland, Ohio

Anything that one could say regarding cancer of the larynx can be found in well known text books and monographs upon the subject, and yet an analysis of the cases presented in this series, as well as of those presented by many others, reveals that the principles of diagnosis as laid down either are not well understood or else are not carried out, since an overwhelming number of patients have progressed to an inoperable state before the correct diagnosis is made. There will be, therefore, ample justification for presenting this subject before any general assembly until patients themselves are educated to consult a physician earlier, and until physicians practicing general medicine will recognize the very great importance of early and correct diagnosis.

Knowledge of the diagnosis of any laryngeal condition cannot be set forth by a verbal description nor by illustrations. Concise quotations from two of the great masters in laryngology are pertinent: "Years of painstaking observation bring into play a subconscious knowledge which cannot be sized and labelled."—Mackenty. "In addition to all tests we have still to rely a great deal on the trained eye."—Sir St. Clair Thomson. My translation of these quotations is—either be qualified to determine the exact cause of chronic hoarseness yourself, or refer the patient to someone capable of doing this before any type of treatment is instituted.

The much lamented Dr. Lynch made the practical statement, "Vocal nodules either in young children or in adults, a retention cyst, and the earliest manifestation of cancer are the only tumors that grow from the free edge of the vocal cord." Here, then, is the explanation of the fact that hoarseness is the earliest and most constant symptom of cancer of the larynx. In early cases,

do not attempt to arrive at a diagnosis after one examination; have the patient under observation frequently. In addition to the necessary laboratory tests, repeated observation by a diagnostic group is the best way to exclude chronic laryngitis, lues, and tuberculosis. Disturbance in laryngeal function that might cause hoarseness can be detected at the same time. A complete view of the entire larynx is absolutely essential and sometimes before this can be accomplished considerable training of the patient is necessary, as well as much skill on the part of the physician.

If a tumor, infiltration, ulcer, or erosion is noticed on the central portion of one cord while the opposite cord is free, fix in your mind its location and size, put the patient on a regimen of silence and observe the larynx at frequent intervals. During the period of observation a complete physical examination should be made. If, under a strict regimen, there is the slightest spread of the growth especially towards the anterior commissure, or even the least lag in the movement of the cord on that side, malignancy is indicated. Complete fixation of the cord means that it has become rather extensively involved by the growth, and in fact when this condition is present, it is a late, rather than an early sign of laryngeal cancer.

A period of a few days spent by the patient in the diagnostic department of any hospital should be sufficient to allow the physician to arrive at the conclusion as to whether tuberculosis or syphilis is responsible for the laryngeal condition, although the fact that cancer may be present with either of these conditions must always be kept in mind. Keeping the patient on antiluetic treatment for a prolonged period without result is to be condemned. The syphilitic larynx responds rather promptly to treatment, and if cancer should be concomitant there is no contra-indication to surgical treatment after a period of antiluetic treatment, while the existence of tuberculosis and cancer in the same larynx offers a hopeless prognosis.

A painstaking clinical examination will, in the majority of instances, make possible a correct

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Sioux City, May 4, 5, 6, 1932.

diagnosis, but in the presence of such conditions as keratosis, papilloma, fibroma, pachydermia, rhinoscleroma and other more rare lesions, a biopsy may be necessary. The biopsy should be deep and should be made through the center of the tumor, otherwise it is valueless. Permission to do whatever operation is necessary should be obtained before the biopsy is done.

Gordon New of the Mayo Clinic utilizes biopsy in a very practical way: In the case of an early laryngeal growth that leads to the suspicion of cancer, a thyrotomy is performed, a biopsy taken and a frozen section made and graded according to Broder's classification. If the growth belongs in grade one, two, or three and it is possible to get well around it and remove it with a safe margin, this is done. Should it belong in grade four, a laryngectomy is done regardless of the size or location of the growth, because of the high degree of malignancy. Very few surgeons have the benefit of Broder's judgment and cooperation.

Authentic cases of laryngeal cancer in young adults, in fact, as young as fifteen years of age, have been reported by laryngologists from all parts of the world. In our series the oldest patient was eighty-one and the youngest forty-two. The postericoid region is the most favored location for the growth in women, in which case hoarseness may be a late symptom: this is also true of cancer which enters the larynx from without.

Results from treatment with radium have been reported; as for myself, in a case that gives promise of a result from laryngofissure or laryngectomy, I have not the courage to suggest other treatment, since the results of these operations are encouraging, as is shown by the following statistics:

From laryngofissure Sir St. Clair Thomson reports relative cure in 85 per cent of his cases; Chevalier Jackson in 79 per cent. As for laryngectomy, Crile reports 27 cases with two deaths; Tapia, 107 cases with five deaths, and Mackenty, 55 cases with no mortality.

The above results indicate that early diagnosis is paramount. If the patient is seen while the growth is confined to the middle or anterior portion of one cord, thyrotomy or laryngofissure should be the first procedure. After the thyroid cartilage has been opened and a thorough inspection of the interior of the larynx has been made, the operator must decide whether or not the growth can be removed with a sufficient margin of safety; this can be done if the growth is confined to the region described above.

If, however, the cancer is more extensive than

could be determined from the preoperative laryngeal examinations and has invaded the subglottic region, extended to the arytenoid or crossed the midline at the anterior commissure, then a laryngectomy is indicated. Whatever operative procedure is decided upon, both the mortality and morbidity rate can be kept to a minimum by careful *preoperative care of the patient*. In the Cleveland Clinic the following are the routine procedures. A roentgenogram of the chest is made; this procedure is of value in ruling out tuberculosis, and gives the only information we may have as to whether metastasis to the chest has taken place. All upper respiratory infection is cleared before operation is undertaken. The mouth and teeth are put in a healthy condition. A sufficient period of hospitalization is instituted in order to have a careful check on the gastro-intestinal tract, the kidney function and the blood sugar. Every effort is made to put the patient in the best possible preoperative state; a Rehfuess feeding tube is inserted through the nose into the esophagus before operation.

For thyrotomy local anesthesia is used. For laryngectomy, if the kidney function is normal, I have found avertin (rectal anesthesia), supplemented by novocain injection, most satisfactory.

At the completion of the operation a blood transfusion of 500 c.c. of whole blood is given routinely. The bed is placed in the shock position with the head down to aid drainage from the trachea and also to protect the mediastinum. A suction apparatus is kept beside the bed constantly, and the tracheotomy tube is kept free from secretions at all times.

The comfort to both surgeon and patient of having special nurses who have been trained in the after-surgical care of a post-laryngectomy patient cannot be overestimated. No morphin is used if it can possibly be eliminated, as its use cuts down the cough reflex which is necessary to keep the tracheobronchial tree free. Codein will usually suffice. One thousand c.c. of 10 per cent glucose to which 30 units of insulin have been added is given intravenously twice daily for the first three days. On the second day water is started through the feeding tube, one dram every half hour for four hours, gradually increasing to one ounce every four hours. On the third day, small amounts of orange juice are given, and if this is well tolerated high caloric feeding is begun. Meticulous care is taken of the wound and the trachea.

The after results of thyrotomy are more pleasing than those following laryngectomy, in that the individual retains that coveted possession "voice,"

even though it be impaired. A great many patients can be taught to develop a serviceable voice following laryngectomy, and for those who cannot, there is the artificial larynx.

There is one controversial point regarding the laryngectomy, which is whether the operation should be performed as a one-stage or a two-stage procedure. Instead of performing either type of operation routinely, it seems sensible to me to reserve decision until the final data have been analyzed in each individual case. One point is axiomatic; when the airway is obstructed the patient declines rapidly, and should there be any respiratory embarrassment this will be increased by the manipulation and pressure incident to operation, and it is unwise to subject the patient to this added risk. Therefore, a tracheotomy should be performed and time should be allowed for the patient to become well accustomed to it, and to recover from the increased amount of secretion and slight elevation of temperature that usually follow. With no laryngeal obstruction present, and the general condition good, there are advantages in having the operation completed in one stage.

CONCLUSIONS

- The cause of chronic hoarseness should be determined positively in every case.
- Laryngeal diagnosis requires special judgment and skill.
- The treatment of undiagnosed laryngeal conditions by heliotherapy, x-ray and antiluetic treatment is to be condemned.
- Adequate surgery, performed early, offers good results in cases of carcinoma of the larynx.

Carcinoma (metastasis)—	
5 yr. 7 mo. postop. 1; 18 mo. postop. 1..	2
Perforated duodenal ulcer—5 weeks postop.	1
Suffocation (alcoholism)—4 mo. postop..	1
Unknown cause	4

Analysis 99 Cases of Laryngeal Cancer

From Service of Drs. Crile, Dinsmore and Mullin, Cleveland Clinic. Males 91, Females 8.

Symptoms	Incidence
Hoarseness	96
Cough	52
Loss of weight.....	47
Dyspnea	44
Pain	39
Dysphagia	35
Hemoptysis	16
Additional data—	
Used tobacco.....	42
Family history of carcinoma.....	8
Dental infection	31
(Not in history of early cases.)	
Metastasis—	
Near	36
Distant (Lung the favorite site).....	8
Questionable (At first examination)...	43
Operation by Laryngofissure.....	12
Laryngofissure advised.....	2
Operation by laryngectomy.....	29
Laryngectomy advised	6
Total operable.....	49
Inoperable	50

STATISTICS

Follow-up results of 41 cases in which operation was performed by Crile, Dinsmore, and Mullin over a period of ten years:

<i>Laryngofissure</i>	Total Cases	Per Cent	<i>Laryngectomy</i>	Total Cases	Per Cent
Good result.....	8	66.6	Good result.....	11	38.0
Recurrence	1	8.3	Recurrence	0	0
Died	3	25.0	Died	16	55.0
No follow-up report.....	0	0	No follow-up report.....	2	7.0
Cause of death:			Cause of death:	No. of Cases	
1. Woman 85 years of age—3 days postoperatively (pneumonia myocarditis).			Lung abscess	1	
2. Man 79 years of age—18 days postoperatively (sudden death from cardiac dilatation).			Embolism	2	
3. Cause unknown.			Pneumonia	4	
			Hemorrhage into right subclavian artery..	1	

EARLY DIAGNOSIS OF CARCINOMA OF THE CERVIX*

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Today the cause of cancer in the cervix or elsewhere is still unknown. There are two factors that are fairly constant in association with cancer of the cervix uteri: age, and a history of one or more pregnancies.

Age: Broadly speaking, cervical cancer is a disease of middle life. It does not belong predominantly to old age. Seventy-two per cent of the cases are between the ages of thirty-five and fifty-five years.

Previous pregnancies: Out of 387 patients with cancer of the cervix at the Johns Hopkins Hospital, only five per cent gave a history denying childbirth or miscarriage. One is therefore confronted by the inescapable fact that in most instances cancer of the cervix is definitely associated with a history of one or more previous pregnancies.

Cancer of the cervix comprises about one-third of all types of cancer. Cervical cancer may be considered under two headings: (1) the epidermoid or squamous cell carcinoma, and (2) the adenocarcinoma.

The epidermoid cancer may arise in any part of the cervical canal, or from its vaginal portion about the external os. The portio in the region of the external os is the most common site of origin for cervical cancer. However, carcinoma may arise from the cervical canal proper or at the internal os.

GROSS APPEARANCE

Cancer of the uterine cervix in its earliest stages probably presents no characteristic appearance that will reveal it to the naked eye. With the progress of the neoplasm, certain changes manifest themselves in the cervical mucosa which, while still intact, present in a circumscribed area, small boss-like irregularities. These, according to Cullen, appear tense and have a bluish-white appearance. Palpation of such an area reveals a peculiar induration which is probably not presented by any other pathologic process. From the early stage the tumor may proliferate in a centrifugal manner with papillary excrescences and present an appearance which is generally described as a cauliflower-like tumor mass. On the other hand, the neoplasm may develop decidedly infiltrative properties, so that its main growth is into the substance of the cervix, and grossly it will appear as a circumscribed, small ulcer with elevated edges which on

palpation are firm and indurated. The cauliflower type of tumor also infiltrates and the slightest manipulation causes hemorrhage.

Carcinomas with distinct infiltrative characteristics that begin at or well within the external os may never present any appearance of new growth when the cervix uteri is observed through the speculum. What is seen is a puckered zone about the external os and if the process is far enough advanced this puckering and retraction may involve the vaginal fornices. Palpation again reveals an unmistakable induration which to the experienced finger is hardly to be mistaken for anything but malignancy.

An endocervicitis is practically always present with cancer of the cervix.

Adenocarcinoma of the cervix uteri cannot be distinguished macroscopically from the epidermoid tumors. It may arise from any portion of the cervical canal.

SYMPTOMATOLOGY

Some form of unusual *vaginal discharge* is the primary symptom in almost every patient suffering from cervical cancer. This is not described as foul—that term applies to a more advanced stage. The discharge may appear as a whitish leukorrhea, or may perhaps be slightly brown in color. It may be watery and thin, not copious at all, but just enough for the patient to notice.

Hemorrhage. By far the most frequently encountered symptom is some irregularity in menstrual blood, manifested by (1) a slight prolongation of the normal period; (2) normal duration but more profuse flow; (3) the flow appearing every two or three weeks; (4) regular flow but intermenstrual spotting; (5) showing of blood following exercise; (6) bloody show after intercourse. From these early symptoms bleeding increases to the constant show or profuse flow of advanced cancer.

Occasionally one may encounter a patient with a fairly early cancer who is decidedly anemic as a result of a severe hemorrhage, but this is not usual. On the other hand, remarkably healthy looking patients are encountered who have well advanced cancers. Patients with a cancer of the cervix present a preceding menstrual history as normal as that of any other group of women until the time of onset of cancer symptoms.

Pain is never a constant symptom of early cancer. In a certain small proportion of cases it may be the only complaint and is usually referred to as a dragging pain in the back or a pain low down in the pelvis with occasional pain radiating down the inside of the thigh. This latter complaint is

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usually from cancer of a fairly well advanced type.

None of these symptoms is pathognomonic of cancer, but all are sufficiently suggestive to warrant a suspicion of cancer until histologic evidence has proved the contrary.

EXAMINATION

Examination should consist of digital, bimanual, rectal and speculum examinations of the cervix and microscopic examination of the tumor tissue. In an early case of cervical cancer where the neoplasm is still limited to the cervical canal and not visible and is not sufficiently advanced to change the shape or consistence of the cervix, the findings on speculum and bimanual examinations are not relevant. The observance of a bloody or serous, malodorous discharge is of importance but by no means of diagnostic importance. These cancers are especially deceiving, because the external os and vaginal mucosa may appear perfectly normal. If, under strictest aseptic precaution, a sound is introduced into the cervical canal and the uterine cavity, and a thin stream of bright red blood escapes from the cervical canal, then the observation may be regarded as highly suspicious of malignancy. If the more advanced cervical cancer is of the so-called inverting type without visible ulceration, then the first important finding on examination is a distinct induration of the cervix and a retraction of the cervical lip about the external os. Speculum examination may reveal nothing more than a retraction of the cervical lips and presence of bloody, serous, or serohemorrhagic discharge. The more common finding, however, in early cases, is a small area of cartilaginous induration on palpation of the cervix. This indurated area may occupy any portion of the portio about the external os or the os proper. On speculum examination the indurated area may appear as: (1) a slightly irregular, non-elevated pink zone that bleeds easily on manipulation; (2) a shallow ulcer with slightly elevated edges; (3) a small elevated tumor with somewhat irregular surface that bleeds easily on manipulation.

Pericervical broad ligament induration can actually be determined, if present, by rectal examination. Pericervical induration may occur in fairly early cases of cancer and frequently represents only an inflammatory process, secondary to the infected cervical neoplasm. Cystoscopic examination is indicated when a patient with cancer of the cervix presents symptoms of a bladder lesion.

DIAGNOSIS

There is only one certain method of diagnosing cancer of the cervix uteri, namely, microscopic

examination of tissue obtained from the suspected tumor. Every woman who gives a history of intramenstrual bleeding, bleeding after menopause, or any menstrual type of vaginal discharge, should, even in the absence of positive physical findings, be suspected of having cancer until the contrary has been proved. (An obvious gonococcal postpartum or idiopathic endocervicitis must be excluded, particularly if it is of a serous or malodorous nature.) Biopsy and microscopic examination is indicated if there is an indurated area on either cervical lip, especially if the overlying surface is granular, vegetative or ulcerated and very vascular. It is also indicated if there is an erosion or ectropion, or if there is a hardened or raised area with vascularity, sponginess or a tendency to ulceration on the surface. If the pars vaginalis is normal in appearance but the intracervical mucosa seems vascular, or granular, the curette may reveal definite intracervical cancer, most often adenocarcinoma.

Differential Diagnosis. Carcinoma of the cervix must be differentiated from: (1) eversion of the cervix with erosion or granuloma formation; (2) cervical ulceration occurring in cases of prolapse; (3) cervical polypi, when they bleed or undergo secondary changes, secondary to interference with circulation; (4) nabothian cysts, when they cause enlargement and marked firmness of the cervix; (5) submucous myoma projecting from the cervix with ulceration and bleeding; (6) interstitial cervical myoma and sarcoma of the cervix, which is exceedingly rare; (7) gonococcal condylomas; (8) syphilis, chancroid and tuberculosis.

The microscope and the blood test will aid in the determination of the nature of the lesion. "Cancer in these modern days is not a clinical entity. It is a microscopic fact. The curette is the physician's weapon, the pathologist is his ally."

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THE DIAGNOSIS OF CARCINOMA OF THE STOMACH*

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For more than the last decade there have been no material changes in the means of arriving at a diagnosis of cancer of the stomach. I shall review the methods we have available and try to emphasize the points that are often passed up as of little importance. However, I make no claim of presenting new ideas.

INCIDENCE

A study of the mortality list from the Division of Vital Statistics in the registration area of continental United States for the decade 1920 to 1930, shows an increase in the death rate due to malignancies during this time and an increase in deaths due to carcinoma of the stomach.

Chart I gives the annual death rate from all causes per 100,000 population. After the rise in 1920 to 1,300 deaths per 100,000, probably due to the epidemic of influenza which was still prevalent

from 83.2 per 100,000 in 1920 to 96.1 in 1928, with a slight drop to 95.9 in 1929. The lower curve on this chart represents deaths from cancer of the stomach. There is an increase from 20.1 in 1920 to 22.2 in 1926 and 1927, with a drop to

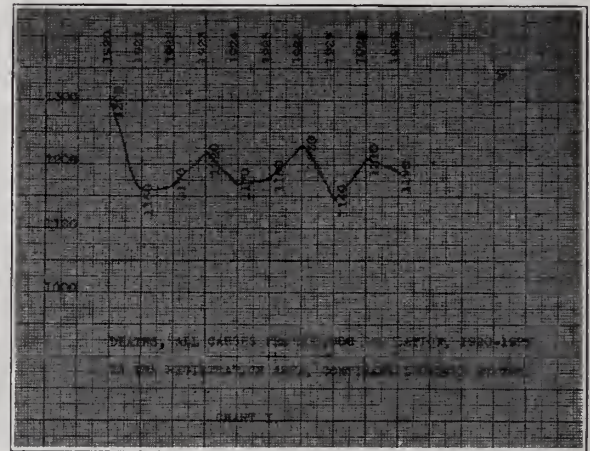


Chart II.

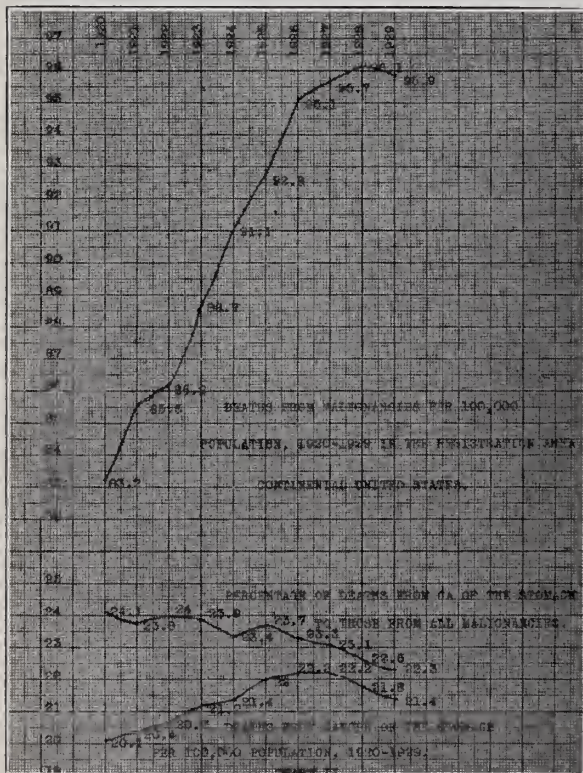


Chart I.

that year, we see the rate fluctuating around a general average of 1,200. In Chart II, the upper curve represents deaths due to malignancies of all types during this same period. There is a steady rise

21.4 in 1929. The middle curve shows the ratio of deaths from cancer of the stomach to those from all malignancies, the general average being 23.4 per cent, which is much lower than the figures usually quoted.

HISTORY

A detailed history is important. Cancer of the stomach is most common during the fifth and sixth decades, and males are more frequently affected than females. The symptoms vary in different individuals and at different times in the same individual. To quote Bloodgood, "There is no clinical history of a clinical case, as the diagnosis must be made in connection with the history, x-ray, laboratory findings and a complete examination." The symptoms are affected by the location of the growth, usually appearing earliest in distal involvements of the pyloric portion, somewhat later if the lesion is in the mid-portion, and often only when far advanced in the fundus and cardiac portion. In the majority of cases the onset is preceded by a negative gastric history. About seventy per cent of this group start with mild, indefinite symptoms in the upper abdomen. Only about twenty-five per cent of all cases give a history of long continued indigestion.

SYMPTOMS

The early symptoms are few and indefinite. The patient first notices a feeling of discomfort in the upper abdomen during or soon after eating. This may begin suddenly following a large meal or improper foods and be attributed to these. Gas

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and belching usually appear next, at first for only a short time immediately after eating, later becoming more or less constant. Slight pain may appear early in the epigastrium and back. It is increased by pressure and may be either increased or relieved by food. Late onset of the pain is the rule in over eighty per cent of the cases, and the pain does not radiate until the cancer is far advanced. It is usually less severe than the pain in ulcer. Alkali and food not infrequently give temporary relief, even in the absence of free hydrochloric acid. Sixty to seventy per cent of all cases involve the pyloric portion. In these cases, the usual onset is a sense of fullness, pressure or weight in the epigastrium during or soon after eating. The distress may vary from day to day and be accompanied by gas, belching and eructation of food. The symptoms also vary with the amount eaten, a large meal usually causing the distress to appear immediately and to be more severe.

Anorexia appears early as a rule and becomes more marked as the condition progresses. There is early loss of strength and this is usually accompanied by marked loss in weight, although there may be a temporary gain. Vomiting appears next and consists of food often mixed with blood, giving the characteristic "coffee-ground" or "sooty" vomitus.

In cases where the growth is in the upper third of the stomach, the symptoms appear late, unless there is involvement of the cardia or lower esophagus. In these cases there is dysphagia, immediate vomiting and early marked emaciation, due to obstruction. When this is at the pylorus, vomiting does not appear for an hour or longer, and often gives relief for a short time.

Slight anemia appears early and may become pronounced. While the temperature is usually normal, slight fever is not uncommon.

PHYSICAL FINDINGS

Physical findings are not evident unless the growth is fairly well advanced. In these cases the tumor may be palpable or there may be nodules about the umbilicus or left supraclavicular region (Virchow's glands) due to metastasis along the lymphatics.

LABORATORY FINDINGS

Unfortunately, we have no specific serologic examinations of blood, urine, or stomach contents on which to rely in making a diagnosis.⁴ The blood count usually shows an early secondary anemia. This varies with the mode of onset and frequently gives a blood picture suggesting pernicious anemia. A moderate leukocytosis of ten to twelve thousand may occur. There is nothing of diagnostic value in the differential count.

The stools should always be examined after the patient has been on a meat-free diet for a few days. A large number of cases will show occult blood, especially when there is no hydrochloric acid present in the stomach. About twenty-five per cent of the cases show a definite melana.¹ The persistent finding of occult blood when other sources, such as meat, bleeding gums or cirrhosis of the liver have been eliminated, is strongly suggestive of malignancy. In the scirrhus type, it is often absent until late.

Gastric examinations should include both chemical and motor function. When vomiting occurs, the vomitus should be examined. The stomach contents one hour after the test meal usually show an increased amount; the toast is poorly digested and considerable thick, ropy mucus may be present. The chlorides are diminished. Hydrochloric acid is usually markedly reduced or absent, although it may be normal or even increased, especially if the carcinoma is superimposed on an old ulcer, or if the growth is in the cardiac portion. Marked reduction of the combined hydrochloric acid is a frequent early sign. The presence of lactic acid is suggestive. When hemorrhage has occurred, the vomitus is brown or of "coffee-ground" appearance. Persistent presence of blood in the lavage always suggests carcinoma or ulcer. Tumor fragments rarely occur in the vomitus, and mucus from cases of chronic gastritis should not be mistaken for tissue. In the absence of free hydrochloric acid, long, non-motile *Oppler-Boas* bacilli occasionally are found. The presence of *Sarcinae* in the stomach contents is against carcinoma. Bloodgood states, "As our experience grows, the chemistry of the stomach becomes less helpful in diagnosis."¹⁸

Of all our diagnostic examinations, the x-ray is by far the most important. We must bear in mind, however, that it is but one of the tests, and should not be accepted to the exclusion of other findings. It should include both screening and radiography. The x-ray alone makes the diagnosis of early cases possible and is far more dependable than the clinical examination. In rare cases, even with the aid of the x-ray, exploratory laparotomy may still be necessary.

By using both the screen and film, motor power, irregularity in outline, filling defects and flexibility of the walls may be determined. Special attention should be given to the pyloric portion and lesser curvature, since this is the site of from seventy to eighty per cent of the lesions. In carcinoma, the motor power is considerably delayed. This is not pathognomonic as delay may also occur

in ulcer. Defects on the greater curvature are almost always malignant.

Carcinoma may give many of the same findings as gastric ulcer, such as changes in peristalsis, defects in the stomach wall, and changes in motility and emptying time, varying with the size and extent of the involvement. Perforating ulcers showing extension into adjacent tissues are usually benign.¹⁰

The examination should be made with the patient in the prone as well as in the upright position, to detect defects in the fundus and lesser curvature. The fluoroscope is particularly helpful in detecting flexibility of the walls, peristaltic waves and defects due to extragastric conditions of the surrounding organs and spine. While a single examination is usually sufficient, in doubtful cases it should be repeated after an interval of one or two days. It may be impossible to differentiate between carcinoma and ulcer in very early involvement of the pylorus and lesser curvature. Eighty per cent of gastric carcinomas start in the prepyloric portion, where ulcers are much more prone to undergo malignant changes.⁹ In old or postoperative cases, care is necessary not to mistake adhesions for filling defects. The fluoroscope assisted by palpation will aid here.

Carcinomas in the area adjacent to the cardia usually cause early symptoms due to obstruction of the lower esophagus. When the patient is examined in the prone position, the barium is seen to trickle through and has an irregular, moth-eaten appearance. Carcinomas of the body are usually extensive before giving symptoms. There is usually a persistent filling defect and bulging into the lumen.

In pyloric involvements, we find extension from the adjacent wall or annular lesions of the lower portion. These usually cause early symptoms due to obstruction, with distension and slowing of the contractions coming early. In cases where spasm is suspected, large doses of atropin should be given and the examination repeated the following day. In scirrhus carcinomas near the pylorus, the greater curvature appears to be drawn toward the lesser, while in ulcer there is no change in the convexity of the greater curvature, and the lesser is straightened out. Success depends more on the skill of the radiologist than on the quality of the apparatus.⁹

Gibbon¹⁹ states that in a review of two thousand consecutive gastric examinations on patients referred to the x-ray department of the University Hospital for any and all gastric symptoms, over a period of eighteen months, gastric carcinomas occurred in 5.5 per cent, gastric ulcer in 3.5 per cent

and duodenal ulcer in about 14 per cent of the group.

DIFFERENTIAL DIAGNOSIS

Gastric Ulcer. Ninety per cent of ulcers occur on the lesser curvature or in the pyloric portion. They rarely occur on the greater curvature. The stomach shows increased activity with incisurae on the greater curvature. There is usually a filling defect and if near the pyloric valve, delay in the emptying time. The distress in uncomplicated ulcer is due to free hydrochloric acid. Neutralization or lavage should give temporary relief. A long chronic history with unchanged symptoms speaks for ulcer. When malignant changes develop on an old ulcer, the distress comes during or immediately after the meal instead of one to four hours later, as formerly. A large meal will cause distress instead of temporary relief. Alkali or vomiting will fail to give the relief formerly experienced. Pyloric obstruction with ulcer may simulate cancer. In these cases, however, the hydrochloric acid content is usually high, while with cancer it is usually reduced or absent. In cancer, the early anorexia and loss of strength are much more pronounced. The secretory meal may show a reduction of hydrochloric acid which was formerly high; washing the stomach until no free hydrochloric acid is present will not relieve the distress, and the combined or protein hydrochloric acid is reduced. A palpable mass is usually malignant. In extensive ulcer, emaciation, hemorrhage, impaired motility and low hydrochloric acid content may simulate carcinoma.

Pernicious Anemia. In pernicious anemia, hydrochloric acid is invariably absent. The blood count is usually lower and there is a primary color index. Leukopenia is the rule. There is a change in size, shape and color of the red corpuscles, except during the remissions. Where carcinoma has metastasized to the bones, the blood picture is often quite similar, but in these cases, the local findings should rule out a primary anemia.

Chronic Gastritis. In these cases the history of long standing good color and state of nutrition of the patient with little or no anemia usually makes differentiation easy. In carcinoma vomiting usually occurs after eating or late in the day, if at all, while in chronic gastritis it occurs in the early morning.

Adhesions. Adhesions usually afford no difficulty after the history and x-ray findings are carefully checked.

Foreign Bodies. In cases of foreign bodies in the stomach, we are usually dealing with hysterical or mentally defective patients. In hair tumors, the palpable mass may resemble carcinoma.

Syphilis. Gastric crises may give retention and irregularity of outline at the pylorus.¹⁸ A positive Wasserman test is of assistance and should call for proper treatment. Remember that carcinoma of the stomach can occur with a positive Wasserman test, both conditions demanding attention. Syphilis of the stomach is rare, but closely resembles cancer.

SUMMARY

To summarize briefly the chief diagnostic points in cancer of the stomach:

The onset is most frequent between the ages of forty and sixty-five, with males predominating. The previous stomach history is usually negative, the patient often stating he has never been aware that he had a stomach. In a small percentage of cases superimposed on an old gastric ulcer, there may be a history of long standing. As a rule the onset is insidious, varying with the type and location of the lesion. The earliest symptoms are anorexia, discomfort, and a feeling of fullness during or immediately after eating, gas, or eructation of food, usually absence of pain, marked loss of strength, slight loss in weight, and slight secondary anemia. The early physical findings are negative and the diagnosis rests on the history, laboratory findings, and x-ray examination.

In conclusion, if we of the medical profession are to lower the mortality rate from cancer of the stomach, the diagnosis must be made early. In the majority of cases when the disease is apparent and readily diagnosed, only palliative treatment remains, and the possibility of a cure has long since passed. There are no symptoms, physical, laboratory or x-ray findings that are pathognomonic of this condition. Each case must be considered as a distinct entity. The history, physical examination and laboratory and x-ray findings must be carefully studied and correlated if we are to successfully combat gastric cancer.

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DIAGNOSIS OF CARCINOMA OF THE LIP*

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The hope of cure in malignancy lies in early diagnosis, as we have heard over and over again. This is especially true in the treatment of carcinoma of the lip.

Cancer of the lip offers a comparatively favorable prognosis to treatment, not because the lesion is more benign in this location than elsewhere, but because of the accessibility of both the primary lesion and the first line of defense, the submental and the submaxillary glands.

Malignancy of any organ of the body is very largely due to two things, namely, a chronic irritation and cancer susceptibility. It is for this reason that the personal history must be taken into account.

Seventy-five per cent of the cases occur in men. Their habits and their occupations may be predisposing causes. Smoking, outdoor occupations, exposure to the sun, wind and dust, burns and bruises are all to be considered. It is a well established fact that chronic irritation to epithelial and squamous cells produces an active proliferation and metastasis. A single trauma very seldom could be said to cause a malignancy, but chronic irritation may.

A greater number of cases occur in the fifth and sixth decades of life, but we are finding an increasing number in the younger years, one case of squamous-cell carcinoma being reported in a boy of thirteen years.

Cancer of the lip occurs in 14.7 per cent of ex-service men suffering from malignancy. This is in a select group of men with an average age of less than forty years. The death rate from carcinoma of the lip in the registration area prevails at the rate of .5 per 100,000 population.

Pathologically and clinically there are two types, the basal cell and the squamous cell. Carcinoma of the vermilion border of the lip is almost invariably of the squamous-cell variety, having a great tendency to proliferation and metastasis. The basal-cell type of cancer seldom forms at the mucocutaneous juncture but it is usually found below. It is very slow in development and has little tendency to metastasis, a point in making a diagnosis as to the type of cancer, and possibly having some effect upon the method of treatment to be taken up.

If for any reason a section is to be removed from a carcinoma of the lip, it should be from the periphery, as this is the most actively proliferating and characteristic portion of the lesion. The cen-

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tral portions are likely to be ulcerated and infected, containing scar tissue and necrosed areas and are not representative of the actual structure of the lesion.

The pathologic diagnosis of cancer of any part of the body is based upon the interpretation of the general structure of the cells and the arrangement of the parenchyma and its relation to the surrounding stroma. A histologic and pathologic diagnosis is not reliable if made from too small or too centralized a section of the lesion. For this reason, biopsy for the diagnosis of carcinoma of the lip is mentioned only to be condemned.

A section large enough to make an accurate pathologic diagnosis requires mutilation nearly or quite equal to a clean-cut, total removal, besides subjecting the patient to the danger of metastasis and a second operation, should the lesion prove malignant.

Palpable lymph nodes are found in the majority of cases, but in over fifty per cent of the early cases they do not show evidence of metastasis. In carcinoma the metastasis may not show itself until weeks or months later. When the lesion has reached this stage the diagnosis, of course, is easy but the prognosis is many times less favorable. If the early stage is neglected or the treatment is postponed, the patient may be excused, but not the surgeon.

Diagnosis of cancer of the lip is comparatively easy, but it must be differentiated from four or five lesions, namely, the pyogenic infections, the tuberculous lesions, syphilis, and leukoplakia. The pyogenic infections usually respond readily to treatment. The tuberculous lesion is usually accompanied by some stage of the generalized disease. The rapid progress of a syphilitic lesion, together with a blood Wasserman test and the use of antiluetic treatment should differentiate syphilis from cancer.

Leukoplakia with ulcer, while rare, may suggest the diagnosis, but as leukoplakia is usually considered a precancerous condition, it should be treated as malignant if it does not heal in a short length of time.

We should keep constantly in mind, and the laity should be taught, that carcinoma seldom develops in normal tissue. Any irritation that may produce a change in the structure of the lip, indicated by scales, fissures, recurring crops of so-called cold sores and fever blisters, bruises and burns, should be looked upon as a potential carcinoma.

I know of nothing new in the diagnosis of carcinoma of the lip. It is a dangerous lesion, as is malignancy anywhere in the body, and it re-

quires the same careful, early, accurate diagnosis.

To err is human. If we must err, let it be on the side of the early removal of the benign growth, with little or no mutilation, rather than the tardy removal of malignant growth with metastasis, suffering and death.

THE RATIONAL MANAGEMENT OF TUMORS OF THE BREAST*

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With the better education of the public regarding cancer, an increasing number of patients are seen with real or fancied disease of the breast. This has been of great value where so much depends upon early diagnosis and treatment. However, with the increase in number of patients we see a relative increase in the benign or borderline conditions where malignancy can be ruled out with little risk. Bloodgood states that in the past thirty-three years this group has increased from one per cent to almost seventy. For this reason great care must be given to the diagnosis and management of breast tumors, and many unnecessary and mutilating operations can be avoided.

Many complicated classifications of breast tumors have been given which are of interest to the pathologist after a mass has been removed. However, in this paper only the more common tumors will be discussed, with the general characteristics of each group.

The *lipomas*, although the most common of the frankly benign tumors, are relatively rare, comprising only about one per cent of all tumors of the breast. They have the characteristics of *lipomas* elsewhere. They occur in adults, are usually superficial, lobulated, and show dimpling of the skin. They have a tendency to grow away from the breast tissue into the softer subcutaneous fat. As they are well encapsulated, they are easily enucleated and require no further treatment. The gross and microscopic appearance is typical. Malignant changes do not occur.

The large group known as the *fibro-adenomas*, although essentially benign, may undergo malignant changes. These are the common tumors of young women often appearing soon after puberty. The patient complains of a definite nodule or nodules which may or may not be slightly painful. On examination a definite tumor is found. It is firm, freely movable and seems to stand out from the surrounding breast tissue. Unless the tumor has reached great size there is no retraction of the nipple or fixation of the skin. Discharge from

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the nipple is not present. Differentiation from a true cyst can be made by transillumination. All single tumors should be removed. Multiple fibro-adenomas in a young woman are best left alone, aside from periodic reexamination. In the intracanalicular form, sarcomatous changes may occur, and every large fibro-epithelial tumor appearing after the age of twenty-five should be suspected of being a sarcoma until removed and proved otherwise. At operation the fibro-adenomas are characterized by their encapsulation. On section the cut surface is smooth and glistens and is pale pink to white in color. Scattered over the surface are small pink dots representing the ducts or alveoli. In the intracanalicular forms the surface is divided into many sections by fine clefts, best seen by spreading the tissue apart with the fingers. The cystic form is rare and shows small cysts grossly in the section. Sarcomatous changes must be carefully sought for in the intracanalicular form. Carcinomatous changes seldom occur. The prognosis is excellent. In Halsted's series of four hundred cases not one developed malignant changes in the remaining breast tissue. The tumors should therefore be removed, first to prove that they are not carcinomas, and second to rule out sarcomatous changes.

The next large group, comprising the cysts, with the exception of galactoceles and such rare forms as echinococcus cysts, can be included under the heading of *chronic cystic mastitis*. Many theories have been advanced to explain this condition but it seems most reasonable to consider it as similar to the changes which occur in the prostate or the thyroid. The changes found in hyperplasia and in involution may all be duplicated in chronic mastitis. Although formerly considered as a disease of the involution period, it is now known that the condition begins much earlier in life, in fact probably at puberty. The patient complains either of pain or of a lump in the breast, or both. The pain may be severe and is worse at menstruation. Tender axillary glands may be noted. The breast is usually tender at certain points. Both breasts may be involved and often multiple lumps may be found in one. A serous discharge from the nipple may appear. Not uncommonly a lump may disappear, due to the spontaneous collapse of a cyst, or a cyst may rupture through the skin and lead to a persistent sinus. In the *interstitial* form connective tissue predominates and the cysts are few in number and small in size. In the *glandular* form the cysts predominate and may be single or multiple. When a single large cyst dominates, the term "blue-domed cyst" is used by Bloodgood. At operation the cyst protrudes through the in-

cision and shows the characteristic bluish wall. On section, however, the contents are seen to be clear or straw-colored. At times an intracystic papilloma is found. Other cases show smaller cysts scattered throughout the breast tissue, formed by the dilatation of the smaller ducts. These may be immediately beneath or near the nipple and on palpation give the sensation of a bag of worms. Where the cysts are scattered throughout the breast, it feels as if it were full of shot. Transillumination is often of value in diagnosis. Carefully taken roentgenograms also give much information when properly interpreted, and furnish the additional advantage of a permanent record.

The relation of cystic mastitis to malignancy has been the subject of much controversy. Bloodgood feels that there is no reason in the light of our present knowledge for considering the condition precancerous; that in a disease as common as cystic mastitis it would be remarkable if a malignant tumor were not occasionally found, as in a normal breast. However, all are agreed that in its simpler forms, as in the shotty or wormy breast, operation should not be performed. Applications of heat and proper support often give relief and glandular extracts are being used with some success. Massage is definitely contra-indicated. Where the entire breast is involved and persistent sinuses are present, simple amputation is indicated, followed by a careful sectioning and study of all parts of the breast. A woman who is approaching the menopause and in whom there are no evidences of regression of the condition, such as decrease in size, cessation of pain, or disappearance of nodules, is probably better off without the breast. On the other hand, if evidence of regression is present, it may be left alone. In younger women a conservative policy may be adopted. The breast is examined at frequent intervals and if rapid proliferation occurs, operation should be performed. Where one or several large cysts are present, they should be removed. This is much better than simple aspiration. Where the cysts are large, the submammary route gives the best exposure and the minimum of scarring.

At the time of operation diagnosis can usually be made as accurately from the gross appearance of the excised mass as by frozen section. In no case should the mass be cut into before its removal, but in case of doubt the entire breast parenchyma should be removed and carefully sectioned by the pathologist. Where malignancy is found by this method, that was not evident in the gross appearance, radical operation can be performed within a reasonable length of time. There

is no evidence that this procedure leads to any worse results than where the original operation consisted of radical amputation.

Of all the borderline tumors of the breast the *duct papillomas* become malignant the most frequently. These differ from the intracanalicular fibro-adenomas in that the actively growing element is epithelial rather than connective tissue. In general this tumor occurs in the older group of patients and is seldom seen before the age of twenty-five. The patient may or may not complain of a lump in her breast. The characteristic symptom is bleeding from the nipple which is so frequent that many consider it pathognomonic. It may also occur with the malignant tumors, although comparatively rarely. Where a lump is present it is often of long standing. Cheatle recognizes two forms: the multiple, usually deep in the breast and seldom malignant, and the single, more superficial form, found near the ampulla of the ducts and likely to become malignant. An interesting and important group are those cases of bleeding from the nipple where no tumor is palpable. Here transillumination is of great help, as the blood-filled cyst is opaque and can thus be localized and removed even when very small. Multiplicity as demonstrated by transillumination is of importance in regard to treatment. The multiple cases can be treated conservatively and radiation should be tried before operation is resorted to. The single tumors must always be looked upon with suspicion and removed with a generous portion of surrounding breast tissue. Particular attention should be given to the base of the papilloma as it is here that malignant invasion first occurs. Where malignancy is found the radical operation should be performed.

Of the malignant tumors of the breast, the carcinomas are the more important. These can be roughly classified into three main groups: the medullary, the scirrhous and the adenocarcinomatous. The first two occur with about equal frequency but the *medullary* carcinoma is the predominating type in younger women. The late cases, of course, present little difficulty in diagnosis but the early cases must be distinguished from the benign tumors. There is nothing characteristic about an early carcinoma. At operation, as one cuts down upon the early tumor, the surrounding tissue is edematous and more firm than normally. Although the edge of the tumor is localized there is no capsule as in the benign tumor. On section the white malignant tissue is well defined from the surrounding tissue, and the cut surface is dry and opaque. Large masses of cuboidal cells with large nuclei are seen microscopically, which

show varying amounts of mitotic division. The amount of fibrous tissue varies.

The *scirrhous* form as a rule occurs at a later age. It grows more slowly and metastasizes later. Due to the extensive fibrosis, retraction of the nipple and fixation of the tumor take place relatively early. The tumor is very hard and cuts with more resistance than the medullary form. On section it is not localized but presents the characteristic stellate appearance from which it gets its name, the white projections of the tumor extending in all directions into the breast tissue. On section it is glistening, moist and translucent, due to the fibrous tissue, and scattered throughout it are seen small, gray, medullary areas. Microscopic examination shows small streak-like nests of cells among the fibrous tissue. The cells are smaller and more elongated than the medullary type and mitotic figures are less common.

The *adenocarcinoma* occurs only about one-fifth as frequently as the other forms. This is the type which arises from the cysts and the duct papillomas. It occurs in the older group of patients and although growing slowly, may reach great size. This type makes up the majority of the large fungating carcinomas with ulceration. As it metastasizes relatively late it is more amenable to treatment than the other forms. In the untreated medullary or scirrhous forms the duration of life is about thirty months, while in this form it often exceeds five years. On section the tumor is found to be a well localized but not encapsulated rounded mass of dry white cellular tissue. Areas of degeneration are often present. Microscopically the typical picture consists of large cuboidal cells which tend to form definite glands. However, as in the other two forms, few pure cases are found.

The *sarcomas* of the breast are very rare, forming about three per cent of the malignant tumors. These usually develop from some preëxisting tumor, the most common of which is the intracanalicular fibro-adenomas. The tumors may reach great size if untreated and have a tendency to invade the skin and cause ulceration. They seldom appear before the age of twenty-five. Where there is no history of a preëxisting tumor the diagnosis cannot be differentiated preoperatively from carcinoma and the radical operation should be performed as though the mass were carcinomatous. The common microscopic picture is of the spindle-cell sarcoma.

The treatment of carcinoma of the breast from a surgical standpoint has been standardized for over thirty years and it is questionable whether any marked improvements have taken place. The operation consists essentially of the complete

clearing out of the axilla and the removal of the pectoral muscles and the breast. Although some attempt the removal of the supraclavicular glands as well, this is probably a useless procedure. Primary closure of the wound is not essential as those cases where a more extensive excision was practiced and the wound closed by grafts, show a slightly greater percentage of cures. Where the disease is limited to the breast there is no more effective cure than the radical operation, which will yield 70 to 80 per cent of cures. Where the glands or tissues of the axilla are involved this drops to 10 or 15 per cent. Taking all cases which can be considered as clinically operable, the percentage of cures is between 36 and 40 per cent. In a disease which has an average duration of life of three years if untreated and where the best surgical treatment cures scarcely more than one out of three, operation should be avoided unless it can be expected to relieve suffering or prolong life. The following criteria have been stated by Adair: (1) any extension of the disease beyond the axilla into the supraclavicular space, or into the liver, chest, or distant parts of the body is considered inoperable; (2) inflammatory carcinoma is inoperable; (3) skin nodules surrounding the breast and extending to the sternum usually mean that the chest is involved, even if x-ray evidence is not yet present; (4) fixation of the tumor usually means that it is inoperable, although not always, as much depends upon the degree of fixation.

Radiation therapy was tried early in carcinoma of the breast due to the unsatisfactory results of surgery. Carcinoma of the breast is relatively insensitive to radiation, particularly surface radiation. The two methods of treatment are radically different. Surgery attempts to cure by the actual excision of all diseased tissue. Radiotherapy, on the other hand, succeeds by starving and devitalizing the malignant cells and locking them up in a dense wall of fibrous tissue. The cure of malignancy by this method can be likened to the cure of tuberculosis by fibrosis and both are alike subject to reactivation. Opinions differ as to the value of preoperative radiation. At present the majority seem to feel that it is not of sufficient value to justify the delay in the operable cases. This may change with improved forms of treatment. Postoperative radiation is always to be used. Although its value has been questioned, it remains the best prophylactic at our command. There is no evidence that it can cause a dissemination of malignancy.

In the inoperable cases much can be done to relieve the patient's suffering. A large fungating

ulcerating mass may be removed by simple amputation. Section of the antrolateral tracts of the cord, although carrying a high mortality rate, is often more than justified for the relief of pain. Even with the most extensive metastasis in a bedridden patient, life may continue for months or years and the use of narcotics should not be begun too early. Recurrences are best treated by radium.

We therefore use surgery in the operable cases, aided by radiation. In the light of our present knowledge it seems better to reserve radiation alone for the inoperable cases. Radium is best used in the form of platinum-covered needles and remarkable results have been obtained in many clinically inoperable cases. It would seem that our best hope for future progress lies in the development of radiation therapy.

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DIAGNOSIS OF CARCINOMA OF THE RECTUM*

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About seventy-five per cent of all rectal cancers are in the incurable stage at the time a positive diagnosis is established. This high percentage of late recognition undoubtedly is due to the emphasis placed on symptoms and findings in the incurable rather than the curable stage; to the public's self-treatment and to the physician's negligence.

If any appreciable improvement is to be made it must come through greater coöperation between the public and the profession and through diagnosis based on a more intensive study and observation of the disease in its earliest stages.

Never take a patient's story as the basis for diagnosis and treatment, but let it act as a guide to the place of investigation. Symptoms of rectal neoplasm may differ in different persons and they may be disguised by other rectal, gastro-intes-

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tinal, bladder, or other pelvic disorders. For this reason symptoms are unreliable. However, in about fifty per cent of the cases following a symptomless period during which the tumor must be small, there is a well recognized stage when the symptoms are chiefly teasing tenesmus, and a sense of incomplete defecation likened to something being caught in the lower rectum or sphincter. This may be described by the patient as pulling, pressure, fullness, burning, or even slight twinges of pain. These symptoms undoubtedly are caused by a spasm in the bowel wall in its efforts to expel the irritating lesion and should serve to guide every physician to the rectum as the place of trouble.

Bleeding follows the irritation stage in from one to three months. It is due to the ulceration of the tumor and its injury by the passage of feces over it. The blood may be bright red for the most part in the early stages, and this is especially true of malignant degeneration of benign adenoma, but soon it becomes mixed with dark blood or small clots with mucus. Early in the disease, the amount of blood lost during defecation is very small, and may be seen only as streaks of blood in the stool. Bleeding is not always the first symptom complained of by the patient. Statistics give it as the first symptom in thirty to ninety-five per cent of the cases. This only means that some physicians are seeing their patients earlier than others. However, if patients would immediately carry the news to their physicians when they first notice blood in their stools, many could be saved.

The further course of the disease depends upon the location of the tumor, the type, and complications. When it is in the ampulla the patient experiences a tendency to defecate more often than usual. First, there may be a bowel movement before breakfast, and finally the patient is obliged to rise earlier than usual for a bowel movement. The tendency increases so that every urination is attended by the passage of small stools with mucus, pus and blood. Later there are passages of blood and mucus alone, a more or less constant desire to defecate and finally only the passing of what is described as bloody "slime." Obstruction here is relatively uncommon although there is some constriction. The pain usually is confined to tenesmus and a "feeling of something in the rectum" until the tumor extends into the surrounding parts. When there is anterior extension frequency of urination and bladder irritation ensues. When it is posterior a dull aching pain is often referred along the sciatic nerves. If it ruptures into the

soft parts there is the pain of an acute infection of the ischiorectal fossa.

When cancer develops in the upper limits of the rectum where the bowel is normally narrowed, obstructive symptoms develop early. There is increasing constipation leading to obstipation and ileus. Here there may be thin or ribbon-like stools. The constipation is relieved with difficulty and may alternate with diarrhea, due to liquefaction of the feces above the point of obstruction. Blood, when present, is small in amount, almost always dark, and comes in small clots; mucus and pus are likewise present in smaller amounts. The pain is more common and of the griping, gas-pain type.

When the carcinoma involves the sphincter region, pain is early and constant, bleeding is early and occurs with the stool, and constipation with alternating diarrhea is often present.

In the rather unusual massive colloid cancer of the rectum, where the whole rectum is converted into a rigid, tubular stricture, bloody diarrhea is often an early symptom, followed by constipation, and going on to complete obstruction. Cachexia develops early because of early dissemination and absorption.

Later, when most of the patients are in a hopeless condition, with extension to the bladder, there is gross bladder irritability, with extension into the mesentery, there is dull, constant pain in the lower abdomen, there is pain referred along the sciatic nerves and severe backache. Often there is intractable pain when sitting on a soft cushion. There may be gradual loss of appetite, edema of the extremities, vomiting and jaundice. There may be symptoms resulting from metastasis in the bones, other viscera and the brain.

Remember that carcinoma of the rectum constitutes from five to ten per cent of all gastrointestinal carcinomas, is frequently seen in the robust individual, is seen more often in the male than in the female, occurs in persons as young as eleven years of age but most frequently between the ages of forty-five to sixty-five years.

In every individual who has symptoms even remotely suspicious of carcinoma of the rectum, a careful digital and instrumental examination is indicated. However, it is well to note the general condition of the patient as to color, nutrition, strength, abdominal contour, visible peristalsis, masses and tender areas. Inspection may reveal the swollen indurated edge of the cancer involving the anal skin, either as a primary affair or as one encroaching on the anal skin from the mucosa above.

The digital examination is best made after giving a cleansing enema with the patient lying on the left side and the knees flexed on the abdomen, followed by a recto-abdominal examination in the male and a recto-vagino-abdominal examination in the female. This is followed with the patient straining in the erect squatting position so that many of the high lying tumors will be brought down within reach of the examining finger.

It is said that over ninety per cent of cases of cancer of the rectum can be diagnosed by digital examination alone and that it is the most important single agent available in making a diagnosis of this disease. Evidently this is misleading for it influences physicians in a good many instances to wait for positive palpable evidence when they should be using other diagnostic means to make an earlier decision. Furthermore, if anything is to be done many cases should be diagnosed before this stage is reached. However, the hard, nodular feeling, the crater, the firm but friable cauliflower mass more or less filling the rectum about the crater, the rigid constriction, the napkin-ring-like stenosis of the higher lying tumors, together with growth predominately circular and often with fixation, are unmistakable evidences of cancer. If no tumor is palpable the appearance of blood on the examining finger is highly suggestive of a tumor just out of reach and calls for rectoscopic examination.

The appearance of cancer through the rectoscope (the elongated eye) seldom is confusing to the experienced physician and to the inexperienced it at least suggests itself. A necessary warning here is to insert the rectoscope with care to avoid accidental injury to the surrounding structures. Any ulcerated tumor which has an indurated, resistant feeling at the end of the proctoscope is highly suggestive of cancer.

In the ampulla the tumor is usually medullary in character with raised, friable edges surrounding a central ulcer or crater. The mass extends in a circle about the bowel more than in the longitudinal axis, presents considerable sloughing and rarely undermines the bowel wall extensively. When the cancer lies high it is usually of the scirrhous, adenomatous type and encircles the bowel early. There is relatively little bowel ulceration until late and then it is less extensive than in the ampulla.

Four clinical varieties of the common adenocarcinoma are spoken of by Miles. The papilliferous resembles the ordinary papilloma, extends on the surface of the bowel wall, rarely fills the lumen, ulcerates early, bleeds easily, has irregular edges, and metastasizes late to the lymph glands.

The adenoid, a most frequent type, is sessile and flattened, its transverse diameter greater than its longitudinal, but extending in all directions. Here there is early fixation. In the mucoid or colloid degenerating type, where colloid degeneration dominates the picture, the bowel wall may become grossly infiltrated and the whole rectum converted into a tubular stricture with marked narrowing of the lumen of the bowel. It is more malignant than the preceding types and is seen frequently in younger individuals. The melanocarcinoma type is situated usually in the posterior wall of the lowermost portion of the ampulla or in the anal canal. Aside from these there is the typical epithelioma of the anal portion and the deep-seated lymphosarcoma.

A stool examination is indicated in all cases and is carried out before any instrumentation. The presence of old blood, especially if associated with pus, is highly suggestive of cancer. There may or may not be contour changes of the stool and it may have a very offensive odor. It is also examined for amebae in case of diarrhea, and for parasites and bacilli. A Wassermann test is made and the sputum examined where indicated. In case of anemia the hemoglobin is determined and a red cell count made. There are no specific laboratory tests.

Fluoroscopy after a barium enema is important in tumors at the upper limit of the rectum, and in certain colloid tumors which tubularize and narrow the lumen of the rectum to such an extent that the proctoscope cannot be passed. The differentiation of a stricture and early carcinoma at the upper end of the rectum by fluoroscopy is not always easy because of difficult visualization caused by the sigmoid falling back over this area. Especially is this true where nothing has been felt or seen, and fluoroscopy should therefore be repeated. X-ray examination also helps to rule out ulcerative colitis and determines the presence of skeletal metastasis.

Biopsy of the tumor should be resorted to in all doubtful cases. If this were done more often, cases would be diagnosed earlier and many patients would be spared radical mutilating surgery. Biopsy gives us positive evidence where an adenoma or a papilloma is suspected of undergoing malignant degeneration, in certain inflammatory strictures of the rectum, tuberculosis, syphilis, ulcers, and in polyposis. Tissue examination also determines the type of tumor present and is of assistance in determining the treatment and prognosis. It must be remembered, however, that cancer can coexist with any of the following: hemorrhoids, amebic dysentery, adenoma, papilloma, polyp,

fistula, fissure, stricture, old scars, ulcers, and other inflammatory lesions.

In conclusion in order that cancer may be diagnosed at a time when something can be done for it, the following changes should be effected in the education of the profession and of the laity. First, the physicians should be provided with better training by the establishment of a proctology course in every medical school to which the practicing physician also has access; second, both the public and the physician should be prevailed upon to think of cancer first in all rectal conditions until proved otherwise by examination; third, the physician should repeat the examination in patients with unexplained symptoms and signs and in those with previous rectal pathology; fourth, a rectal examination should be included in the routine examination of all middle-aged and elderly individuals.

Discussion on Symposium

Dr. Con R. Harken, Osceola: I rise to discuss these papers because of a specific interest. I am interested in knowing the relationship between gastric studies and cancers other than cancer of the stomach.

My situation affords but a limited number of cases for observation, but I have been greatly impressed by certain occurrences in a few of those cases.

It seems to me that gastric study is seldom made in cancers other than those of the stomach, because of the unpleasant nature of that study. We have made gastric studies in some inoperable cancers and in some postoperative cases with extensive metastasis. It seems to me that the same findings occur, that is so far as a study of gastric juice is concerned, in those cases, as in cancers of the stomach.

Noting a deficiency, I gave hydrochloric acid in large doses to one lady who had had a scirrhus carcinoma of the breast removed, and subsequently developed a definite nodule in the other breast, with metastasis in the pelvis and an immobile uterus. After giving the hydrochloric acid, this nodule practically disappeared; in fact I thought it had disappeared, but rediscovered it later. The uterus became mobile. The patient increased in weight.

Having a few of these cases on record, I was further impressed by the article by the late Willy Meyer in the January number of the *American Journal of Surgery*, in which he referred to the work of Fischer-Wasels in Frankfurt University. Fischer-Wasels reported the cure of a limited number of cases by the administration of large doses of hydrochloric acid, and by the inhalation of carbon dioxide with oxygen, thereby producing an acidosis in the patient.

I was further impressed by an article in the *Journal of Laboratory and Clinical Medicine*, April, 1931, "Hydrogen Ion Concentration of the Blood in Untreated Cancer Cases and Its Relation to Prognosis," by Ellice MacDonald and co-workers in the Graduate

School of Medicine, University of Pennsylvania, and the Radiological Clinic of the Philadelphia General Hospital. These workers studied untreated cancer cases, accepting 7.38 P^H as normal. In the twenty-six cases they studied, they found the P^H to be 7.44; which, compared with 7.38 means practically an increase of 13 per cent alkalinity in the blood of untreated cancer cases. Out of the twenty-six cases, eight were superficial cancers involving the skin, and showed a normal P^H , which left eighteen cases with internal cancer. Their P^H was 7.46 which, of course, would be considerably more than the 13 per cent increase.

They also noted that the P^H was a definite index as to the success of treatment. The higher the P^H , the more favorable was the prognosis, and the more alkaline, the worse the prognosis.

Their conclusions were as follows: The average P^H in twenty-six untreated cancer cases was found to be 7.44, or considerably more alkaline than normal. The average of the eight untreated superficial cases was 7.38, and that of eighteen untreated internal cases was 7.47. The degree of alkalinity is closely related to the prognosis of the disease.

In my own practice I have noticed that by giving large doses of hydrochloric acid and buttermilk, foods and drugs that increase the acidity, these patients greatly outlive the ordinary prognosis.

I have also noticed that cancer cases, other than cancer of the stomach, are generally dismissed after certain procedures are performed, without thorough clinical study. Many times such a clinical study would show a lowered acidity in the stomach. The replacement or the supply of such acidity, whether or not it justifies us in giving hope as to cure, definitely benefits the patient. In my opinion he would live longer and do better.

Dr. William Jepson, Sioux City: Mr. President and Gentlemen of the Society: I feel that we are indebted quite beyond the ability of expression for the elucidation of our guests as well as the men who have partaken in this program of the problem of cancer. I say "problem of cancer" because of the fact that there is no disease with which humankind is afflicted that today takes so large a toll as cancer, except the diseases of the cardiovascular system.

The general mortality is one out of ten; in our state it is one out of nine. If we were to add to this mortality list, the number of which I do not have a definite knowledge, who may possibly be cured and do not enter into this question, it might be one out of eight. If we allocate those cases of cancer to the cancer age, it is not far from one out of six.

Gentlemen, remember that one out of six of the patients who consult you in the office, past the age of forty, will possibly die of cancer, unless we become more fortunate in the future than we have been in the past.

It is not alone in respect to the number of cases of cancer that appear in the human race, but the further fact that our profession is very, very largely embarrassed by the fact that its knowledge as re-

gards the etiology, and consequently the prophylaxis, the diagnosis and treatment, is not what we could wish.

As has been so thoroughly and capably outlined by Drs. Lewis, Mullin and Whitehill, we can hardly rely upon biopsies unless they are thoroughly done. That means a larger part of the mass that we suspect of being cancerous should be examined or we may be misled through the fact that the part subjected to examination may not yet be malignant, if it should happen to be a benign growth.

We must rely on very indefinite symptoms, there being nothing pathognomonic; first, increase in size; second, those due to senile degeneration, and third, disturbance of function. All of these symptoms are very slight in their incipency, with the result, as we have seen today in the presentation of these papers, that they are often overlooked in the beginning.

Let me point out one factor here that I think influences our profession a good deal. We know our defect in diagnosis and possibly in treatment. That is largely gained from the fact that 51 or 52 per cent of cancers develop in areas that are not susceptible to palpation, inspection, and the development of early disturbance of function. Those, for example, that occur in the brain, the esophagus, the stomach, the intestine, the pleura, the lung, and the pancreas, for the time being, in the absence of a better method of treatment than we have now, must be left out of consideration. They are hopeless or practically so.

There is a certain percentage of cases of cancer of the stomach that are susceptible to operation or removal of the growth if recognized early. Then, again, there are those in the intestinal tract. Let us call your attention to the fact that there are another thirty-five or thirty-six per cent of cases that appear on the skin, in the point of entrance and exit of the intestinal tract and the rugae of the vagina. (By the way, you have had presented to you twenty-seven and one-half per cent; in other words, the cases that have been presented to you today involve twenty-seven and one-half per cent of the cancers that we have to deal with.) For us to overlook those, in my opinion, is a grave reflection upon our duty to our patients. In fact, gentlemen, I feel that for any of us to allow a patient of the cancer age to come to us, and go out of the office without knowing quite clearly that he is not a sufferer from cancer is just as great a crime as to say, "I don't know anything about it. I didn't examine her heart. I didn't examine the various other important organs."

It is just as easy to become cognizant of the fact that a patient has a cancer or precancerous condition of those areas that are mentioned, as it is to recognize any other disease that we have to deal with. It is true that it may at times confuse you, due to the fact that other diseases may simulate cancer, but as a rule there is not much difficulty in making the differentiation, or at least one that is adequate.

By the way, allow me to utter a thought, and I believe it has been uttered before by Dr. Whitehill. If you are in doubt, let the patient have the benefit

of the doubt. I believe it is better to remove the area, let us say, for example, the breast, if we are in doubt. It is better to sacrifice the breast than to sacrifice the patient.

Dr. Bretthauer spoke about cancer of the rectum and anus. Cancer of the oral cavities, including the jaw, which has one-half times more cancer than any other organ, comprises about four per cent of all cancers, three and nine-tenths per cent occur in the rectum and one per cent in the anus, and about one per cent in the lip compared with the rest of the oral cavities; that is, nearly one-half as many as there are in the breast. It is one-sixth as many as occur in the stomach. Gentlemen, those cases are practically always overlooked. In fact, as pointed out, sixty per cent (and my experience would confirm this figure) are inoperable at the time the patients are sent to the surgeon or come to his attention. Why? I do not know unless it is the fact that we are too much opposed to making an examination of the rectum. Certainly every patient who has any symptoms should be included with the rest. I say that any man who practices medicine is not too good to examine an individual's anus to see if he has cancer. In this way he may make himself acquainted with the large majority of the cancer cases.

Summary by Surgical Guest

Dr. Dean D. Lewis, Baltimore: I do not know why I should be asked to make a summary of these papers, because they already have been summarized, and what has been said has been good.

All through these papers there has been the definite statement that we do not know the etiology of carcinoma. I think no one can disagree with that statement. The necessity of early diagnosis has also been mentioned. I think no one can deny that we should always make an early diagnosis. The reason we do not make an early diagnosis in many instances is very definitely that we do not see the patient until the carcinoma has developed beyond the point at which it can be successfully removed. That applies to carcinoma of the stomach.

I have already said here this afternoon that only twenty per cent of the carcinomas of the stomach which come to the Hopkins Hospital are operable. The ones that come earlier are the ones that have pyloric block, because that gives a definite syndrome which demands operative interference or some treatment.

Carcinomas of the body, of the stomach, and carcinomas in the lesser curvatures without obstruction, are seen late when they have peritoneal metastasis.

Most of the inoperable cases are inoperable because of peritoneal metastasis. The same thing applies to carcinomas of the breast. We see carcinomas of the breast with lymphatic metastasis to the axilla and metastasis to the chest. The patients do not know they have carcinoma until they accidentally discover a mass in the breast. That occurs in spite of all the propaganda that has been going on in the country for the last few years about carcinoma of the breast.

Sometimes I think such propaganda should be handled very carefully, because it is just as bad for a woman to think she has a carcinoma of the breast, and to have that thought for years, and not die of it, as to have carcinoma of the breast and know it and die of carcinoma. Carcinoma fright is just as bad to most patients as the actual disease.

There is another thing about carcinoma that I think is very definite. I believe we are becoming more conservative in the treatment of carcinoma all the time, and I think that is a great mistake. There is a little tendency, if one has a patient with a small carcinoma of the breast, to do an operation that is not quite radical. Many treat it with x-ray or with radium. Operation is postponed for some time. A small carcinoma of the breast should have a radical operation, because if early diagnosis is important, that is the case which should give the best prognosis. I am a little confused there myself, because I have never been able to determine, from the size of the tumor, what the prognosis is going to be. Some of the earliest tumors (if you judge early recognition of tumor by its size) are the ones that cause earliest death.

I have talked to Dr. Bloodgood about this often. He said, "Lewis, the trouble with you is you don't distinguish between acute and chronic cancer of the breast."

I said, "That is perfectly true. If you operate upon a tumor of the breast and the patient lives a long while, it is a chronic carcinoma. If she dies early, it is acute." That is the only way you can distinguish, whether the patient lives a long while or dies early.

I have seen some patients with carcinoma of the breast who have had a large tumor with extensive lymphatic node involvement, in whom I hardly thought it necessary or wise to remove the breast (and I have done a radical operation in some of those cases) who have lived the longest.

We have great difficulty, I believe, in distinguishing between the small carcinoma and the large carcinoma, as far as the ultimate prognosis is concerned.

There is another thing about carcinoma of the breast, and that applies to carcinoma almost every place except carcinoma of the colon and of the sigmoid for instance, which will stay well a long while.

I should like to know what percentage of carcinomas we operated.

Recently Dr. Lenhoff and myself looked up 150 cases of cancer of the breast operated in the Hopkins Hospital. At the end of nine years only ten per cent of these patients are living. They say, "Did all those patients die of carcinoma recurrences?" I cannot say that definitely, but I know that out of another total population of 950 people without carcinoma, a larger percentage would be well at the end of ten years than those who have carcinoma.

There is another statement that has been made this afternoon, by the last speaker, in which I heartily agree, and that is that carcinomatous patients are more poorly studied and more poorly treated than

any group of patients we have. A patient comes to you with carcinoma. He is looked at, put in the hospital, operated upon, and is discharged. That is usually the ordinary way that carcinomas are treated in hospitals that I know of. While I do not approve of carcinoma institutes, I do approve most heartily of segregation of carcinomatous patients in the hospital, where they can be carefully examined by the internist, by the biochemist, by the dietician, by the surgeon, where all can cooperate to study cancer patients carefully and see that they are followed postoperatively and see what is done for them after they are dismissed from the hospital.

I believe that sometime we will have carcinomatous patients grouped in wards in the hospitals in this country where they can have the service of anybody in the hospital, and we will all cooperate in their treatment.

There is another thing, and that is biopsy, which is often discussed. What is the effect of biopsy upon carcinoma? If you can make a diagnosis of carcinoma without a biopsy, I think that is the thing to do. In doubtful cases where you have to sacrifice a part, I think a biopsy is indicated, but that biopsy should be followed by immediate treatment.

I think the confusion which exists sometimes with regard to whether biopsy is a good procedure or a bad one, depends upon whether a positive diagnosis is made of that material or whether it is postponed two or three weeks. Any biopsy in which the operation is postponed any length of time is bad.

Carcinoma is one of the most discouraging things I know of. I think we are making earlier diagnoses, but we are going to be defeated until we find the cause and the prevention. Patients do not come to physicians until the lesions are well advanced.

There are some cases in which incomplete examinations are made, in which there is carcinoma which could be removed in the early stage, but they are lost because of the carelessness of the examining physician.

BRONCHOGENIC CARCINOMA*

HORACE MARSHALL KORNS, M.D., Iowa City

Primary carcinoma of the bronchi, formerly classified indiscriminately as a variety of lung tumor, and somewhat neglected by medical writers, is now being distinguished as a separate clinical and pathologic entity and accorded the attention to which its increasing importance among the diseases of the mediastinum and lungs entitles it.

ETIOLOGY

Adler's monograph,¹ published in 1912, comprehended 374 cases, but a year later Weller,² whose criteria were more satisfactory, found it necessary to exclude from the category of bronchogenic carcinoma all but ninety of the cases on

* From the Department of Internal Medicine, State University of Iowa.

record at that time. Most observers report a much increased incidence since the war, but inasmuch as the increase is by no means restricted to those countries which took an active part in the conflict, the war itself cannot be considered an etiologic factor. In 1927, McCrae, Funk and Jackson³ collected 128 cases from the literature which had appeared since Weller's paper, and to these they added fourteen cases of their own. Jung-hanns,⁴ in 1929, reported 168 cases which occurred between 1912 and 1927 at the Dresden Pathological Institute. He was unable to show much increase in bronchogenic carcinoma alone, but his figures for primary carcinoma of the lungs and bronchi together revealed an increase of nearly 300 per cent between 1912 and 1927. In a recent paper based on the material at Zwickau, Lipshitz⁵ reported that the cases were twice as numerous in the decade ending in 1928 as they were in the decade immediately preceding.

The increasing incidence has excited much speculation, and a great many allegedly noxious agents have been blamed. Perhaps the most important of these are dust and irritant gases. Lipshitz, in particular, is convinced of their complicity. He states that Lubarsch's figures for all Germany for the years 1920-1921 showed an incidence of 450 cases of primary carcinoma of the lungs and bronchi among 8,301 cases of carcinoma of all kinds, i. e., 5.4 per cent, whereas at Zwickau, in the midst of an industrial and mining region, it was 9.8 per cent. In Utrecht, a non-industrial district, bronchogenic carcinoma in the period 1924-1928 constituted only 2.6 per cent of all cases of carcinoma, whereas in Zwickau its incidence for the same period was 12.9 per cent. Comparison of Zwickau with Zürich, Jena, Budapest and Torino gave similar results. Lipshitz points out that the Zwickau region, with its high incidence of pneumoconiosis, has only about half as many cases of pulmonary tuberculosis as comparable non-industrial regions, and suggests, logically enough, the same reason for its high morbidity from bronchogenic carcinoma. Carcinoma of the bronchi is so common at Schneeberg, a mining region in Saxony, that the mountaineers call it "Schneeberger Lungenkrebs." A committee composed of Schmorl, Rostoski and Saupe was appointed to investigate it. They reported that they were unable to discover a definite exciting cause, but Lipshitz states that the incidence fell off greatly after the mines ceased to be worked.

Before the war bronchogenic carcinoma was often found in conjunction with pulmonary tuberculosis, but such a coincidence is much less common today.

Ninety per cent of the cases occur in persons

past thirty-five years of age, and the peak of incidence lies between the ages of fifty-five and sixty. Some observers find that the disease is attacking an increasing number of younger persons. More than 80 per cent of patients with bronchogenic carcinoma are males.

PATHOLOGY

The tumor itself is small, often no more than a slight thickening of the wall of the bronchus. It shows little tendency to ulcerate. Histologically it is usually an adenocarcinoma or a squamous cell carcinoma. The latter is preceded, of course, by metaplasia of the bronchial mucosa. There is no decided preference for either the right or left main bronchus.

Metastases take place in most of the cases, showing a preference for the tracheobronchial, axillary and cervical lymph nodes, the interstitial lymphatics of the lung, and the liver and bones; less frequently they reach the kidneys, brain and adrenal glands. According to Erdheim,⁶ before the war the metastases of bronchogenic carcinoma manifested a predilection for bone, and were osteoplastic, whereas since the war the bone metastases are much less common, and when they do occur they are more likely to be osteoclastic. The bone metastases are found usually in the vertebrae, ribs, sternum, or skull. From the vertebrae the tumor is prone to extend to the dura and produce symptoms referable to encroachment upon the spinal cord or its nerve roots. In this connection it is important to remember that metastases to the vertebrae may be neither osteoplastic nor osteoclastic, but indifferent, and therefore roentgenographically invisible.

As a secondary manifestation of bronchogenic carcinoma, the Bamberger-Marie syndrome of pulmonary osteo-arthritis may be mentioned.

DIAGNOSIS

The symptoms of carcinoma of a bronchus include cough and expectoration, pain in the chest, hemoptysis, air hunger, dyspnea, pleural effusion (which may be the sole symptom for many months), fever, and the symptoms secondary to pressure and encroachment on mediastinal structures. It should be noted that the cachexia usually associated with malignant tumors is not infrequently missing.

The close resemblance to pulmonary tuberculosis, especially early, before there has been much extension of the tumor to the mediastinal lymph nodes, is often striking, and emphasizes strongly the importance of always taking into consideration the possibility of bronchogenic carcinoma when cough, hemoptysis and pleural effusion are the symptoms, and the lung signs are equivocal or indefinite. All of the clinical signs of the tumor

depend upon its secondary manifestations, viz., bronchial obstruction, encroachment upon mediastinal structures, and metastasis. If bronchial obstruction develops slowly, which is the rule, the sequence of events distal to the obstruction is as follows: purulent bronchitis, bronchopneumonia, induration pneumonia with pleurisy and pleural effusion, and bronchiectasis. The possibility of mistaking this process, at one stage or another, for extensive tuberculosis or caseous pneumonia is obvious. If bronchial obstruction develops rapidly enough the result is atelectasis, often maintained by persistent pleural effusion. In such a case the signs of greatly diminished lung volume help very materially to rule out tuberculosis. In any case it is necessary to search the sputum carefully for tubercle bacilli, as well as for tumor cells, and to supplement physical examination by roentgenograms of the lungs and mediastinum. Roentgenographic visualization of the bronchial tree by means of lipiodol is frequently helpful, and in doubtful cases bronchoscopic examination should be resorted to for the purpose of inspection and in order to obtain a specimen of tissue for histologic examination. The differentiation becomes relatively easy after pressure symptoms appear.

The symptoms which may result from metastasis to the mediastinal lymph nodes are not essentially different from those produced by other mediastinal tumors. Perhaps the most frequent disturbance brought about by bronchogenic carcinoma is obstruction of neighboring bronchi and of the superior vena cava. The former is betrayed by the increasing air hunger and dyspnea and by extension of the lung signs, and the latter by the classical manifestations of venous stasis in the neck, head and arms. Not infrequently the main pulmonary vessels are encroached upon, increasing the work of the right ventricle and augmenting the cardio-respiratory symptoms. Gradual erosion of a branch of the pulmonary artery produces hemoptysis, and erosion of a pulmonary vein causes sudden death from air embolism. Invasion of the pericardium leads to pericarditis carcinomatosa with effusion. Involvement of the left recurrent branch of the vagus produces the usual symptoms of paresis of the vocal cords, and paroxysms of tachypnea, hyperpnea, or tachycardia may occur if the pulmonary or cardiac branches of the vagus are intrenched upon.

By obstructing and eroding the left main bronchus, a saccular aneurysm of the arch of the aorta may reproduce perfectly every cardinal symptom and sign of carcinoma of that bronchus, including intermittent hemoptysis and many of the pressure symptoms. If the aneurysm is small, the differ-

entiation may be quite impossible except by bronchoscopy. If it is larger and more diffuse, and particularly if there are collateral signs of syphilitic mesaortitis in the root of the aorta, the physical and roentgenologic signs should be sufficient to distinguish it.

Primary tumor of the lung, originating in the parenchyma and enlarging in all directions, instead of spreading from the hilum, should be recognizable in the majority of cases. The increase of lung density which it produces is developed *in situ* rather than secondarily through the medium of bronchial obstruction, and therefore shows less tendency toward a lobar distribution. It is not so likely to give rise to hemoptysis nor to lead to encroachment on mediastinal structures, and cough and expectoration are not such prominent features. Bronchoscopic examination gives a negative result. Malignant lymphoma and metastatic tumors of the mediastinum and lung are usually distinguished without great difficulty.

In some cases the purulent bronchitis and bronchopneumonia which follow bronchial obstruction terminate in abscess instead of induration pneumonia, with the result that the tumor and bronchial obstruction are overlooked, and the whole process is misinterpreted as primarily infectious. This error can be avoided by keeping steadily in mind the pathologic changes which may ensue from bronchial obstruction, by paying particular attention to the history, and by resorting in questionable cases to lipiodol and bronchoscopy.

Bronchogenic mycosis of the lung is a possibility which calls for especial attention to the history, careful examination of the sputum, and perhaps bronchoscopy. If there is anything to suggest that a foreign body may be the cause of the bronchial obstruction, bronchoscopy must be undertaken at once.

Occasionally the primary tumor produces no localizing symptoms or signs. In such cases either it is discovered accidentally by roentgenologic examination, or its existence remains unsuspected, or at least undetected, even if its metastases give rise to symptoms.

TREATMENT

Unfortunately, there is little hope at present of effecting a radical cure of bronchogenic carcinoma. Jackson's two cases which were treated by resection of the tumor through the bronchoscope and the few cases which have been apparently arrested by Roentgen ray treatment constitute the exceptions. Early diagnosis is, of course, the paramount desideratum. The implantation of radium emanation seeds in the tumor would seem to offer the most promising prospect of recovery. Temporary relief of pain and the symptoms which are

referable to enlargement of the mediastinal lymph nodes is obtained by Roentgen ray treatment.

CONCLUSION

The increasing incidence of bronchogenic carcinoma calls for more serious attention to the question of the exciting cause, and for a sharpening of diagnostic acumen, in the hope that adequate prophylactic and curative measures may be developed.

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Case Report

HEAD INJURY*

H. B. HENRY, M.D., Des Moines

T. L., a male aged fifty-two years, was struck by a boxcar on February 5, 1932. He was unconscious when found. He was taken to a hospital, where bruises were evident on the left side of his head. X-ray examination showed no fracture. He regained consciousness after five hours and appeared to make good recovery during the next five days so that he was able to leave the hospital. After a few days at home, he returned to his work as railroad yardman and tried to perform his regular duties. He did not feel well, however, and in about a week called his family physician. He was suffering from headache, dizziness and vomiting. He was given a sedative and in a few days was able to go to the physician's office. He was advised to have consultation, but was noncommittal.

On April 14, still complaining of headache, dizziness and nausea, he consulted an eye, ear, nose and throat specialist. The vision, fields and pupils were normal. The fundi showed multiple arterial hemorrhages about each disc and large retinal veins. He was referred to an internist, whose diagnosis was encephalitis, based on the headache and some apparent drowsiness. He was hospitalized for thirteen days.

During hospitalization his temperature was normal and his pulse rate 70 to 80. He refused spinal puncture. He was able to be up much of the time, although he was drowsy and had some head discomfort. He left the hospital without permission and remained at home for six days. His

relatives insisted upon his return, stating that he was not right mentally. A spinal puncture on May 8 showed increased pressure, eight cells, and increased globulin, with a colloidal gold curve of 5555110000. Blood counts were as follows:

	Red Cells	White Cells
May 5.....	6,400,000	11,000
6.....	6,500,000	10,000
7.....	6,400,000	13,000
10.....	6,000,000	22,000
11.....	8,600,000	21,000
12.....	9,000,000	18,000
14.....	9,400,000	18,000

On May 12 a neurologic examination was made and the following notations recorded. The patient was in restraint, was delirious and very restless. Respirations were sighing at times. He appeared to understand what was said to him, although his replies were not clear. He called a nickle "ten cents." His pulse was around 80. The pupils were equal and responsive to light. The right side of his face, his right arm and leg showed a motor paresis of central type. The skin reflexes were absent and the deep reflexes were exaggerated on the right side. A Babinski sign was present. The eye-grounds showed retinal hemorrhages, venous engorgement and choked discs.

A neurologic diagnosis of left-sided intracranial lesion was made and operation advised. The history of recent trauma and the development of symptoms suggested recurrent bleeding. Operation was not allowed, however, and the patient lived until May 16, when he died of respiratory failure.

Postmortem examination of the head showed no evidence of fracture. There was some discoloration of the cranium on the inner side at the left parietal eminence. There was no hemorrhage outside or beneath the dura and no subarachnoid hemorrhage. The brain itself showed a discolored area $2\frac{1}{2}$ inches in diameter under the parietal eminence which felt softer than the surrounding tissues. When incised, a large cyst was found containing serum in one portion and fresh hemorrhage in the deeper portion. The cyst was about the size of an egg. The brain surrounding it was stained with blood pigment and the cortex was flattened. The left hemisphere had herniated under the falx and showed a crescentic indentation on its medial portion above the corpus callosum. The cerebellum showed an indentation where it had been pushed against the foramen magnum.

COMMENT

Death in this case occurred two months and ten days after the injury. The appearance of the lesion indicated that there had been bleeding sev-

* Presented before the Polk County Medical Society, May 31, 1932.

eral weeks before death, probably soon after the accident. The history showed some aggravation of symptoms two weeks after the injury. The serum in the cyst probably was a result. The hemorrhagic portion of the cyst is believed to have come from bleeding about eight days before death, at the time the paralysis began to develop on the right side of the body. No large vessels were present in the bleeding side of the brain. The blood is believed to have come from very tiny arterioles or capillaries. The case was operable and the patient might have been saved had the cyst been evacuated.

The actual damage from any head injury is not easy to estimate. A lucid interval following such an injury, succeeded by signs of intracranial damage, has often been found due to bleeding, either subdural, extradural or subarachnoid. It is indeed rare to find the lesion within the brain substance.

The red cell count in this case was quite unique; the author has seen no similar rise in any other case of head injury. It was probably due to dehydration, since the patient was delirious and fluids were therefore not forced. The spinal fluid curve was of the paretic type. The Wassermann test was negative in blood and spinal fluid.

The most interesting features in this case were the damage to the brain without fracture of the skull; the long interval between injury and death; the lucid interval during which the patient was ambulatory; the cyst which showed evidences of repeated hemorrhage; the indentations on the left side of the brain and cerebellum from the high intracranial pressure.

RESOLUTIONS ON MEDICINAL ALCOHOL*

WHEREAS, The Congress has undertaken to fix the doses of wine and whiskey and brandy by legislative fiat, thus taking over a function properly belonging to the pharmacologist and physician, and

WHEREAS, The administration of the Volstead Act compels physicians to betray the confidence of their patients by keeping a record of their diseases and ailments for inspection by Federal Prohibition agents, and thus to violate the traditions of the medical profession, medical ethics and the laws of a number of states, and

WHEREAS, The legislature of the State of New York has enacted into law the Hastings Bill freeing the medical profession from the unwarranted usurpations of the Federal Congress over the control of medical practice, and

WHEREAS, Relief from these conditions has been sought in the courts and has been denied by the United States Supreme Court, and

WHEREAS, The Wickersham Commission has unanimously recommended:

1. "Removal of the causes of irritation and resentment on the part of the medical profession by:
 - a. Doing away with the statutory fixing of the amount which may be prescribed and the number of prescriptions;
 - b. Abolition of the requirement of specifying the ailment for which liquor is prescribed upon a blank to go into the public files;
 - c. Leaving as much as possible to regulations rather than fixing details by statute."

NOW THEREFORE BE IT RESOLVED, That The New York Academy of Medicine hereby formally expresses its disapproval of those portions of the Volstead Act which invade the right of the State of New York to regulate the practice of medicine within its own borders, and which deprive the physician of his right to the free exercise of his judgment in the practice of his profession, and be it

RESOLVED, That The New York Academy of Medicine demands of Congress the repeal of said portions of the Volstead Act, and be it

RESOLVED, That The New York Academy of Medicine urge each of its members to demand of his Senators and Congressmen the repeal of said portions of the Volstead Act, and be it

RESOLVED, That The New York Academy of Medicine approves of the Hastings Act, and the return of the entire control of medical practice in the State of New York to the authority of the state, and be it further

RESOLVED, That the Secretary of The New York Academy of Medicine be, and hereby is, instructed to transmit a copy of these Resolutions to the Senators from New York and to each Representative in Congress of the State of New York.

MEETINGS OF THE AMERICAN COLLEGE OF PHYSICIANS

Announcement has been made that the American College of Physicians will hold its seventeenth annual clinical session at Montreal, with headquarters at the Windsor Hotel, February 6 to 10, 1933.

Dr. Francis M. Pottenger of Monrovia, Calif., as President of the College, has charge of the program of General Sessions. Dr. Jonathan C. Meakins, Professor of Medicine and Director of the Department, McGill University Faculty of Medicine, is general chairman of local arrangements and in charge of the program of clinics. Mr. E. R. Loveland, Executive Secretary, is in charge of general business arrangements, and may be addressed concerning any feature of the forthcoming session, including copies of the program, at the executive offices, 133-135 S. 36th Street, Philadelphia, Pa.

* Adopted by the Council of The New York Academy of Medicine, March 25, 1931.

STATE HEALTH COMMISSIONER'S PAGE



D. C. Stulsmuth, M.D.



PROGRESS OF THE BUREAU OF MATERNITY AND CHILD HYGIENE

The medical practitioners of this state and the Bureau of Maternity and Child Hygiene are working together in an effort to inform and to instruct prospective and expectant mothers of their needs before, during and after the baby's arrival. Evidence indicating the truth of this statement follows:

Requests for the set of prenatal letters for patients under their care have been received from doctors of medicine practicing in all of the ninety-nine Iowa counties.

The number of physicians allowing the Bureau to cooperate with them is equal to twenty-five per cent of the total membership (2141) of the State Medical Society.

The number of medical practitioners allowing the Bureau to cooperate with them is equal to not less than fifty per cent of the number of men who hold membership in their respective county medical societies:

1. In each of twenty-four of the ninety-nine counties.
2. In each of six of the nine counties which comprise the tenth councilor district.
3. In each of four of the nine counties which comprise the first councilor district.
4. In each of three of the nine counties which comprise the seventh councilor district.
5. In each of two of the nine counties which comprise respectively the fourth, sixth, ninth and eleventh councilor districts.

6. In one of the nine counties which comprise respectively the second, third and fifth councilor districts.

7. And in none of the nine counties which comprise the eighth councilor district.

Evidence indicates that whenever the plan and policies of the Bureau are explained to individual medical practitioners by representatives of the Bureau the number of physicians who allow the Bureau to cooperate with them is materially increased. Little or no contact has been made by representatives of the Bureau with the medical men practicing in Polk, Webster, Benton, Grundy, Buchanan, Delaware, Dubuque, Linn, Henry, Jefferson, Lee, Louisa, Muscatine, Van Buren, Ida, Woodbury, Clay, Dickinson, Emmet, O'Brien, Palo Alto, Pocahontas, Sioux, Fremont, Mills, Montgomery, Page, Humboldt, Wright, Davis, Madison, Union, Allamakee, Clayton, Fayette and Winneshiek counties. When one keeps this fact in mind the reason for the relatively low percentage of physicians cooperating in certain councilor districts is apparent.

The members of organized medicine and other medical practitioners as well rarely fail to work with the Bureau when they fully understand its plan and policies. The list of practitioners who are taking advantage of the services of the Bureau grows longer each day. Written and verbal reports from physicians who use the services most indicate that they are beneficial to patient and physicians alike.

PREVALENCE OF DISEASE

Disease	Sept. 1932	Aug. 1932	Sept. 1931	Most Cases Reported From
Diphtheria	31	28	33	Polk
Scarlet Fever	84	35	50	Polk, Pottawattamie
Typhoid Fever	69	35	16	Hardin, Sioux, Black Hawk
Smallpox	11	16	17	Clinton, Monona
Measles	8	4	9	Woodbury
Whooping Cough	28	53	92	Polk, Des Moines
Cerebrospinal Meningitis	2	1	4	Union, Webster
Chickenpox	17	7	17	Lee, Adair
Mumps	11	14	19	Johnson
Poliomyelitis	18	8	34	Polk, Cerro Gordo, Webster
Tuberculosis	37	56	35	Davenport
Undulant Fever	15	15	2	Clay
Syphilis	210	304	211	(For State)
Gonorrhea	279	312	534	(For State)

The JOURNAL of the
Iowa State Medical Society
ISSUED MONTHLY

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THE MAN BEHIND THE WHEEL

Several agencies, operating through the medium of many investigating committees and regulating bodies, have awakened the public to a consciousness of its responsibility for the large number of accidents caused by the operation of motor vehicles. All investigations incriminate the man behind the wheel. In spite of the fact that it has become general knowledge that the mortality rate from automobile accidents has sharply increased from year to year (in 1931, 33,500 deaths) accurate scientific data were not at hand to determine the cause for this alarming rate. Certain recent observations and analyses seem to shed light upon this problem and may furnish a background for its control.

It would seem of particular interest to note that on the average only one driver in twenty is dangerous to himself and to the public. It is by careful analysis of the accidents of this five per cent, and the inauguration of corrective measures to this group, where possible, that automobile accidents may be reduced during the oncoming years when we can certainly believe that even greater speed will be practiced by the average driver.

In the State of Michigan, drivers arrested for traffic offenses are given both a nervous and mental examination as a part of a general physical study. Of an impaired group studied, with a median age of thirty, approximately twenty per cent were definitely feeble-minded, seventy per cent were of inferior intelligence, while the remaining ten per cent suffered from serious physical defects or defects in vision or hearing. Seventy-five per cent of the group were handicapped by alcoholism. According to the standards established by the examining physicians, considerably less than twenty per cent of the entire group were

acceptable as drivers under the most liberal interpretation of the term. If it is true that only one driver in twenty should be considered as dangerous, it is not at all inconceivable that the figures given in this Michigan study should be a very important, if not the determining factor in motor accidents, since the figures cited are approximately the same as those quoted for the average adult population.

The reports prepared by the State Highway Commission of the State of Indiana stress the factor of fatigue as responsible for a large group of motor accidents: "Noting the condition of the drivers, we find that sixty were intoxicated, fifty-three asleep, and thirty extremely fatigued. A study of the individual accidents would indicate that a much larger number of accidents were caused by the fatigue of drivers. Too much emphasis cannot be placed upon the warning to operators of motor vehicles to guard against driving when they are extremely fatigued from long hours of work, lack of sleep and rest, or from other causes."

Vital statistics available for Iowa for the year 1931 indicate that of the 2,427 deaths from accidental or violent means, 536, or nearly twenty-two per cent of the total number, were due to automobile accidents. To this number may be rightfully added forty-two additional deaths caused by railroad and automobile collisions bringing the grand total to 578 deaths for the year for this state alone.

The present tendency of people to drive mechanically imperfect or worn-out cars as a program of economy does not explain adequately the increase in deaths from motor accidents. Every analysis seems to indicate that nine out of ten accidents are directly chargeable to the car being out of control, or the inability of the mind to coordinate quickly enough.

The man behind the wheel must be more thoroughly considered if this serious condition is to be relieved. Several states have attempted to control or correct the situation by enacting laws making the drivers of automobiles financially responsible through indemnifying insurance for the loss of life or injury to property resulting from automobile accidents. Such laws are certainly highly commendable, and will in a large measure provide for adequate restitution in cases of property loss. No indemnity is adequate for the loss of human life. Further, it would appear that indemnifying insurance fails to reach the fundamentals of the problem. If it is true that nine out of ten of all accidents are the direct results of car drivers being unable to quickly and adequately meet an emergency, and if it is also true that a very large per-

centage of these individuals suffer serious mental, nervous, or physical defects, it would seem basically sound to require drivers not only to pass a driving test for license to operate motor vehicles, but also that they be required to pass a physical and mental test to demonstrate their abilities as drivers. No one, I believe, questions the program of strict and rigid physical examination and the high standards of physical fitness required of pilots of airplanes. Few persons would care to risk their lives to a pilot of an airplane who was mentally subnormal, who was blind, or partially so, who, because of nervous instability, would be unable to adjust himself momentarily to the changing conditions of air traffic, who, because of fatigue or the overindulgence in alcoholic beverages, had dulled his sensibility, or one who, through greed, arrogance, or selfishness, refused to obey the well-known rules of safety in transportation. It would certainly appear that an automobile, traveling at possibly sixty miles an hour, was fully as capable of producing human suffering or destruction of property as an airplane cruising at perhaps one hundred or even one hundred fifty miles per hour.

In spite of these facts, little attention is given to the physical, mental or temperamental qualifications of individuals operating motor vehicles. Only by a recognition of these important facts and the adoption of methods which will eliminate this defective group can we hope to reduce this annual loss of over 33,000 persons, with a resulting loss of time and earnings to the additional millions who receive serious injuries. These figures are an indictment of our civic carelessness.

CANCER MORTALITY INCREASE

Twenty years ago, cancer stood eighth in the list of death causes. Today, it is advanced to second place. The total number of deaths caused each year in the United States by cancer is quoted at 120,000. The disease is responsible for ten per cent of the deaths from all causes. There are present in the United States at all times between 300,000 and 500,000 persons suffering from this disease.

These alarming statistics are rendered somewhat less depressing when we consider that cancer is a disease of maturity and old age, and that in many instances it attacks those individuals who have already completed their life work. Death, disease, and suffering are not for the physician to explain, but rather for him to prevent or cure, and for this reason the medical profession finds little of comfort in such a philosophic consideration. Thousands of the most brilliant minds in America and in the countries abroad are working

diligently to find the possible cure for this deadly scourge. Millions of dollars are available for the prosecution of this work, but with all this expenditure of effort, of intellect, of money, there seems to be a touch of mockery in the ever-increasing death rate from this condition—a death rate for which there appears to be no definite or entirely satisfactory reason.

Some authorities, eminent in this field of observation, have postulated that the increasing death rate has resulted from an increased ability upon the part of physicians to diagnose malignant conditions. Another has stated that in his opinion the increase in the rate observed is due to the fact that more people are saved from death at a younger age, and for this reason permitted to enter the zone in which malignancies are most frequently observed. Others consider that the increase has been due to the more accurate recording of vital statistics, and the encouragement of these bureaus for accuracy in death returns. That the first observation is an important one is borne out in the fact that with the development of more accuracy of laboratory diagnosis and with greater diagnostic skill upon the part of the surgeon, these malignant conditions are more readily and more accurately diagnosed. It is hardly conceivable that this improvement in diagnostic skill should explain, however, the sharp increase observed during the past two or three years. The mortality curve has not shown the uniformity that this explanation would suggest.

Prior to 1931, the average yearly increase for the past twelve years in cancer mortality had been approximately one and one-half per cent per annum; whereas, in 1931, the rate rose seven and four-tenths per cent, and returns for 1932 would indicate that a still further rise of perhaps as much as nine per cent would be reported this year. Certainly diagnostic skill has not advanced so materially in the past two years that this rate should be properly ascribed to this cause. That the advances of science have extended the span of life by permitting thousands of individuals formerly dying from the contagious or preventable diseases to reach adult life cannot be questioned. The death rate from the exanthematous diseases, from typhoid, from malaria, and the dysenteries have all shown a remarkable reduction in mortality during the past score of years. However, if the factor of the relative advance in age were the only one, we might reasonably expect a corresponding increase in mortality from cardiac disease, chronic nephritis, cerebral hemorrhage, arteriosclerosis, and other diseases of advanced age. While it is true that the death rate from these conditions has shown a marked increase during the past twenty

years, there has been no period of sharp increase such as that recently observed with cancer. In fact, the rate from the so-called degenerative diseases has shown a very uniform and even curve for the entire period.

No significant changes have been made in the methods of collecting vital statistics during the past two or three years, which could in any way account for this definite rise in mortality rates. While it seems likely that these several factors are operating jointly to produce the increase in the death rate from cancer, it also appears quite likely that there may be other factors over and above those mentioned which exert an influence on these statistics, or that there are factors being introduced into our life activities of which we have no knowledge, which of themselves contribute to this rise. Time alone will answer this problem.

PHYSICIANS BECOME CHAUFFEURS

In the October issue of the JOURNAL (p. 517), a private communication from a New York physician was quoted as follows: "Conditions are so bad [in New York City]—worse every day—that nearly 500 physicians work as taxicab and truck drivers." Several skeptical readers have expressed doubt concerning this statement presumably upon the basis that to our knowledge no physician in Iowa has been forced to such extremes to secure a living. Confirming the statement previously quoted, we publish in its entirety a news item taken from the *New York Times* of October 13, 1932, under the caption, "Plight of Doctors Revealed as Twenty Here Become Chauffeurs":

"Trying conditions in the medical profession were reported yesterday by Mrs. Julius Ferber, president of the Physicians' Wives League of Greater New York, at the first meeting of the season at the Hotel Astor. The League also started the fall campaign for membership and for funds to help needy widows and orphans of physicians.

"Physicians were never in such a plight as they are at present, Mrs. Ferber said. She related that in Brooklyn alone twenty persons licensed as physicians had taken employment as chauffeurs to make a living, and that elsewhere in the city twelve were writing insurance for a livelihood.

"Blaming encroachments for their condition, she said that had the league been organized ten years, many of the physicians' difficulties could have been avoided."

We have been advised that in Iowa certain physicians have been so distressed by present economic

conditions that they have been required to cut their expenditures far below that normally considered as essential for professional welfare. Some have found it necessary to withdraw from professional societies, to absent themselves from scientific meetings, and to limit their office equipment replacements to those of frank necessity. In a few instances, Iowa physicians have been required to supplement their incomes by other activities but certainly the condition in Iowa cannot compare with that reported from the great metropolitan area of New York.

FEE SPLITTING

The alleged fee splitting activities by the brother of the recent mayor of New York City seem to have brought to public attention this vicious practice which is a perennial topic for discussion before medical meetings. An editorial in the *New York Times* of September 27 scored corporation counsel, Hilly, for his indifference in an investigation of the ex-mayor's brother and four other physicians who were alleged to be in a fee splitting ring. The editorial questioned, "Did the four physicians in pure kindness, charity, admiration, divvy with the mayor's brother?"

Corporation counsel, Hilly, in refusing to act stated that it "is a matter for the medical profession to take up." The Grievance Committee of the State Board of Medical Examiners, quoted in turn, "feels that it may not as a statutory body determine that it is unethical" to split fees. Again it appears that investigation and denunciation of fee splitting is more of a gesture than a real desire to secure facts and exercise discipline. Fee splitting never exists for a want of evidence since any disciplinary body wishing to secure evidence could do so by employing a good detective who would be able to supply ample, unrefutable evidence, in most cases on short notice.

After all, is the average physician tremendously interested in ridding the profession of this unethical and vicious practice? We believe that the righteous ones fear the ill-will of those brother practitioners who may be condemned, while the unrighteous feel entirely satisfied to continue the practice so long as that practice can be hidden from public view by an attitude of righteous indignation.

A JOURNAL OF INDUSTRIAL MEDICINE

The industrial physician and surgeon must be familiar with the industrial organization, manufacturing processes, and the various accident hazards and toxic materials of industry. The

industrial executive must be familiar with the economics of medicine and law as related to industry. The constantly growing interdependence of industry and medicine, and the increased importance of the relation of law and insurance to both are rapidly creating a special field that may well be called industrial medicine.

In recognition of this special field of medical practice the owners of *Industrial Relations*, the monthly magazine dealing with the economics of labor utilization, have launched a new journal entitled, *Industrial Medicine*, under the editorship of D. R. Jones, of Chicago. The avowed purpose of the journal is for the cumulative study of the industrial inter-relations of medicine, law, insurance and economics. The character of the articles included in this first number, published in October, would forecast a healthy and ethical activity for the journal, and suggest its usefulness, not only in this special kind of medical practice, but also in the advance of medical science in general.

The editorial offices of *Industrial Medicine* are, 844 Rush Street, Chicago, Illinois.

THE NEWS MAGAZINE OF MEDICINE

In spite of the fact that there are today over 1,250 weekly, monthly, bi-monthly, quarterly, and yearly periodicals relating to the practice of medicine, during the past month two new journals in this field have made their appearance; the one entitled *Industrial Medicine* has been reviewed elsewhere; the second, under the title *Modern Medicine*, is published in response to an avowed need for a magazine which should "present all the news of the medical field, as sifted by the process of medical journalism, in a curt, bright, readable style that remained absolutely faithful to the medical facts presented by the original investigators, whose work it should merely report."

The editorial policy of *Modern Medicine* "has been molded to achieve the widest readers' interest in its field consistent with the most confidence and respect for its authority, accuracy, timeliness, completeness—ethical responsibility." Casting off the shackles of alleged "mathematical plainness," the literary style of *Modern Medicine* follows that school of journalism first popularized by *Time*, *The News Magazine*, and now widely copied in newspaper circles. One is impressed with the thought that perhaps a member of the editorial staff of *Modern Medicine* has at one time written headlines for a city newspaper, since we find such titles as "343 Makes the Grade," with the subtitle of "Liver Extract Intravenously," and again, "Hearts, Inc. Meets the Emergency," with the subtitle "Cardiac Manifestations in Hyperthyroidism." Is it "vitalizing" and "literating" as

claimed by the editors, to present an abstract of a paper on "Abdominal Symptoms in Manifest Heart Disease" under the caption "Riot in Diagnosis"? I quote the first paragraph of the review: "Jointure of heart and stomach has been frequently noted by experienced clinicians, sly matrimonial advisers, largely ambitious young women. 'The way to a man's heart lies through his stomach,' say the women. 'When a patient complains of his stomach, think of his heart,' observe clinicians and medical educators, who enjoy a good pithy epigram now and then."

Perhaps this is "a curt, bright, readable style," but somehow it leaves the writer unimpressed. Mathematical plainness, in our humble opinion, seems more fitting for the presentation of medical truths, even in this modern age, than the style quoted above, which is characterized by the editor as "colorfully written in a literary style that assures bright easy reading."

Perhaps our reaction to this journal displays senility or a lack of appreciation of modern journalistic art. It is new; it is different. If you would care to see and judge for yourself, address The Editorial and Business Office at 84 South Tenth Street, Minneapolis, Minnesota.

ILLICIT PRACTITIONERS PROSECUTED

While Iowa laws define quite specifically those persons who may and those who may not practice the healing arts within the state, there are at all times a considerable number of persons purporting to heal, who have not met these legal requirements. The division of Law Enforcement under the Iowa State Health Department was created and has been operated to protect the public from medical fakers through the rigid enforcement of the Iowa statutes pertaining to this subject. During the past twelve months this division has investigated 299 cases, in all of which the inspectors have either been able to dispose of the case themselves, or have secured prosecution on the part of local authorities to correct the evil.

In spite of the nation-wide publicity which has been given to quackery through many channels during the past few years, there appears to be a considerable proportion of the population who are unable to protect themselves from the evils of quackery. While education is considered the cure for quackery, we realize that the process of education is a slow one, and while the public is becoming educated, only legal intervention can preserve public health. Iowa with its high degree of literacy still squanders thousands of dollars upon naturopaths, faith-healers, herb doctors, drug venders, religious healers, and manufacturers of questionable medicines.

THE OPEN FORUM

ON THE MEDICAL EDUCATION OF THE PUBLIC

H. B. Young, M.D., Burlington

Medical journals, as well as some lay publications, have for years devoted space to pleas for the better education of the public in affairs medical, a recession from the policy of reticence maintained heretofore by physicians generally.

Medical organizations have not been slow in responding to this appeal. They have established speakers bureaus (notably in Illinois and Iowa) with lists of speakers and topics available to lay audiences without charge; they have hired the facilities of radio stations for medical broadcasting (notably the American Medical Association, which also offers *Hygeia* as a journal for popular reading); they have sponsored signed articles in the lay press (notably in the *Chicago Tribune*); and still the cause may be said to languish. This conclusion, which some enthusiasts for this activity may question, is not just a personal observation. It is based on the recent discouraging survey of results of these concerted efforts in a neighboring state.

Something must be wrong, either in the concept or in its execution, and there should be no delay in taking stock of the situation, because the White House Conference on Child Welfare (with its statistical report of ten million defectives in a population of forty-five million children) is calculated to give the issue greater prominence.

In this *status quo* three factors suggest themselves. The first is lack of support, from one cause or another; from dislike of notoriety to actual disbelief in the efficacy of the policy on the part of some physicians of influence in almost every community. The second factor is overshooting the mark in the educational courses furnished. It may not be a case of the parrot's summing up of his interview with the monkey (although that may have happened, since the temptation to enlarge upon the achievements of modern medicine is too great to be resisted); but it takes a teacher with experience and discretion to gauge the mentality of his pupils. It should go without saying that advanced work is worse than wasted on the primary grades; and for those in the upper grades (the intelligentsia, or would-be intelligentsia of the usual audience) discrimination must be exercised lest their knowledge be overestimated. There has been much self-prescribing based on the Evans letters. The third factor is the possibility that the assumption that the public wishes to be educated medically may be unwarranted. Some of the laity undoubtedly are interested, but this portion (most likely a small minority) must eventually realize that medical education means something more than the memorizing of certain physical findings, recounted in Chautauqua style. The others, the masses, after all the time and

effort spent upon such education, have practically ignored it.

The explanation, put in concise form, is that the public is generally lacking in curiosity; not the idle kind, but that which is the foundation of all education, the urge to investigate with an eye to future use. They can marvel, probably do, at reported medical achievements, but they marvel in much the same way on beholding the skyscraper and the airplane, with neither of which they have actual contact. Moreover, since it is true that one may have much schooling and, without constructive curiosity, remain uneducated, it is hardly to be expected that these idle gazers would care for more intimate knowledge of the phenomena of medicine. They might listen for a while to the dissertations of architects and contractors, because it is known that they can duplicate their work *ad libitum*, but the impersonal address of the physician falls in a different category. In this there is no assurance of desired results, as indicated by the architect and the contractor, but just an assumption that certain procedures should be followed because they have shown, to date, the best results. That is a foreign language to those dealing mostly with the inanimate. They are used to, and expect, a definite personal statement of performance. Not getting it from qualified physicians, they continue to pin their faith to charlatans who give such statements. Even the farmers, who should be immune to such blandishments, through their daily contacts with living things, give ear to false doctrines—witness, the recent Iowa “cow war.”

Would that this picture were less pessimistic, but the facts recited are indisputable, and these facts should be looked squarely in the face. They show that the cause can be won only by direct attack; not by the round-about method of free clinics and free “instruction.” The offer of “something for nothing” always carries with it the stigma of little value or of “something up the sleeve.”

MEETING OF THE BOARD OF TRUSTEES

The Board of Trustees of the Iowa State Medical Society met in the offices of the state society on Thursday, October 27, 1932.

The resignation of Dr. William Jepson, as councilor for the fourth district, was accepted. Dr. James E. Reeder of Sioux City, deputy councilor of Woodbury County, was unanimously appointed to succeed Dr. Jepson until the next annual session of the House of Delegates.

The resignation of Dr. C. B. Taylor from the Committee on Constitution and By-laws was accepted by the Board. Dr. Channing G. Smith, of Granger, was unanimously appointed to succeed Dr. Taylor, until the next annual session of the House of Delegates.

SOCIETY PROCEEDINGS

Boone-Story County Medical Societies

Thursday, October 20, the Boone and Story County Medical Societies met at the Story Hotel in Nevada, where C. B. Luginbuhl, M.D., of Des Moines, furnished the scientific part of the program, presenting a paper on Cardiac Manifestations of Goiter. Thomas A. Burcham, M.D., also of Des Moines, was present and contributed to the entertainment of the evening by showing motion pictures taken during his western trip.

Cerro Gordo County

The regular meeting of the Cerro Gordo County Medical Society was held Tuesday, October 18, at the Eadmar Hotel. Following a six-thirty dinner, Andrew H. Woods, M.D., director of the Psychopathic Hospital at Iowa City, addressed the society on The Brain as an Organ. He pictured it as it has grown up through the lower animals and pointed out what its value has been and how it can be kept in the best working order.

T. E. Davidson, M.D., Secretary.

Crawford County

The second fall meeting of the Crawford County Medical Society was held Tuesday, October 25, at the Hotel Denison in Denison. Dinner at seven was followed by the scientific program, after which a short business session was held. The program consisted of The Relation of Infections of the Central Nervous System to Public Health, by Howard A. Lanpher, M.D., of Des Moines; Pathology and Treatment of Acute Anterior Poliomyelitis, Thomas L. Houlton, Creighton University School of Medicine, Omaha; and Special Diagnostic and Therapeutic Procedures in Surgical Infections of the Central Nervous System, J. Jay Keegan, University of Nebraska School of Medicine, Omaha.

Dallas-Guthrie Society

Erwin von Graff, M.D., of the State University of Iowa City, presented the scientific program for the Dallas-Guthrie Medical Society, when that organization met in regular session Thursday, October 20, at Panora. Dr. von Graff spoke first on Uterine Bleedings, and second on The Most Common Diagnostic Errors in Gynecology.

Decatur County

The Decatur County Medical Society met in Leon, Thursday, October 13, and the following scientific papers were read: Diseases of the Thyroid, John B. Synhorst, M.D., of Des Moines, and Per Oral Endoscopy, James A. Downing, M.D., also of Des Moines. Dr. Robert L. Parker, secretary of the State Society

was present and gave a brief report of the activities of the State Society.

Fred A. Bowman, M.D., Secretary.

Dubuque County

Tuesday, October 11, the Dubuque County Medical Society met at the Finley Hospital in Dubuque for its regular meeting. The program was as follows: Chemical Eye Burn with Modern Treatment, H. G. Langworthy, M.D.; General Treatment of Syphilis at the Dubuque Venereal Clinic, H. A. Stribley, M.D., discussion opened by Roy I. Theisen, M.D., Consideration of Interstitial Keratitis, H. G. Langworthy, M.D.

Roy I. Theisen, M.D., Secretary.

Linn County Meetings

On October 13, the physicians of Linn County were addressed by Louis W. Sauer, M.D., associate professor of pediatrics, University of Northwestern Medical School on Feeding Problems, including Pyloric Stenosis in Infancy, Anorexia in the Tottler, and Malnutrition in the School Child. The address was discussed by Drs. P. C. Jeans of Iowa City, C. A. Waterbury of Waterloo, J. F. Gerkin of Waterloo, H. W. Krause of Cedar Rapids and M. J. Foster of Cedar Rapids. A ten minute paper on Trichomonas Vaginalis was read by Florence Johnston, M.D., of Cedar Rapids, and discussed by Dr. B. J. Moon, also of Cedar Rapids. There were 160 doctors in attendance. The next meeting will be Thursday, November 10, at the Hotel Montrose with Adolph Sachs, M.D., of Creighton University, speaking on Agranulocytic Angina. R. A. Vorpahl, M.D., of Cedar Rapids, will present a ten minute paper on Coronary Observations.

T. F. Hersch, M.D., Secretary.

Madison County

Dr. and Mrs. W. H. Thompson entertained the members of the Madison County Medical Society at a six-thirty dinner held at their home in Winterset, Monday, October 10. For the scientific program following the dinner, W. E. Wolcott, M.D., of Des Moines, talked on Pathogenic Streptococci in Their Relation to Chronic Arthritis, and Daniel J. Glomset, M.D., also of Des Moines, discussed Rheumatic Disease. Both talks were supplemented by lantern slides. Dr. Thompson gave an interesting report of a case of Pernicious Anemia.

C. B. Hickenlooper, M.D., Secretary.

Marion County

The Marion County Medical Society met in regular session Thursday, October 20, at the Masonic Hall in Pleasantville. Dinner was served at six-thirty, after which the following program was presented: Delegate's Report, E. C. McClure, M.D., of Bussey; Address on The Perkins, Haskell-Klaus Law, the Hon.

E. W. Dingwell, Judge of the Fifth Judicial District, Adel, and Remarks on State Society Activities, State Secretary Robert L. Parker of Des Moines.

C. S. Cornell, M.D., Secretary.

Muscatine County

The Muscatine County Medical Society met at the Hotel Muscatine for a six-thirty dinner with physicians from Louisa, Scott and Washington counties as guests. The program consisted of short papers on the various aspects of medical economics and public relations, in which all present entered into a lively discussion. Those who contributed short papers were: Gordon F. Harkness, M.D., of Davenport, John I. Marker, M.D., also of Davenport, Richard C. Ditto, M.D., of Oakville, C. A. Boice, M.D., of Washington, and J. L. Klein, M.D., of Muscatine.

C. P. Phillips, M.D., Secretary.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Hotel Fort Des Moines, Tuesday, October 25, with an attendance of almost a hundred members and guests. Clifford W. Losh, M.D., presented an illustrated lecture on Types of Benign Prostatic Hypertrophy and Their Management, which was discussed by Drs. O. W. King, A. G. Fleishman, L. A. West, E. J. Harnagel, H. C. Willett, and E. B. Walston. A feature of the program was the showing of motion pictures of a vacation trip taken by Daniel F. Crowley, M.D., and companions, down the Salmon River, during the fall of 1931. Dr. Crowley further described incidents of the trip during the showing. Following adjournment of the meeting many members remained to participate in the activities of the usual social hour.

Taylor County

The dentists of Taylor County were the guests of the physicians when the Taylor County Medical Society met in Bedford, Thursday, October 6. C. L. Bain, M.D., of Corning, spoke on The Irritable Colon, and M. R. Francis, D.D.S., of Bedford, talked on Uses of Calcium and Cod Liver Oil in Pregnancy.

Washington County

The Washington County Medical Society held the October meeting in Wellman, Tuesday, October 4. The Ladies Aid Society of the M. E. Church served a turkey dinner at six-thirty in the Church parlors. Later the guests listened to President Hoover's address over the radio. This was followed by a program prepared for the occasion. There was a good attendance and everyone enjoyed the event which was sponsored by the Wellman doctors.

W. S. Kyle, M.D., Secretary.

Woodbury County

Tuesday evening, October 18, members of the Woodbury County Medical Society met in regular session at the Martin Hotel Ball Room for a dinner

meeting. S. A. Slater, M.D., superintendent and medical director of the Southwestern Minnesota Sanatorium at Worthington presented a paper on A Study of the History and Symptoms of Tuberculosis, and E. Raymond Gelvin, M.D., of Sioux City, read an article on Some of the More Common Bladder Infections and Their Management.

Southeastern Iowa Medical Association

The fifty-seventh annual meeting of the Southeastern Iowa Medical Society was held in Wapello, Thursday, October 6. The program began at three o'clock and was as follows: The Ketogenic Diet and Its Uses in Epilepsy and Migraine, W. A. Sternberg, M. D., Mt. Pleasant; The Treatment of Toxemia of Pregnancy from the Standpoint of the General Practitioner, H. E. Graber, M. D., Fairfield; External Eye Conditions in General Diagnosis, with lantern demonstration, Gordon F. Harkness, M.D., Davenport. Officers elected for the coming year are: Dr. Ira N. Crow of Fairfield, president; Dr. L. E. Weber of Wapello, vice president; Dr. H. E. Graber of Fairfield, secretary and treasurer. Davenport was chosen as the meeting place for next year.

AUXILIARY NEWS

Dallas-Guthrie County

The Woman's Auxiliary of the Dallas-Guthrie County Medical Society met in regular session at Panora, October 20. After luncheon, the meeting was called to order by the president, Mrs. E. L. Bower. Open discussion about legislation found the women well informed. A chairman was appointed for each town in the two counties, to determine if copies of the magazine Hygeia were received in every school and library. After a profitable and very pleasant afternoon the meeting adjourned.

President of the National Woman's Auxiliary Dies

Mrs. Walter Jackson Freeman, president of the Woman's Auxiliary to the American Medical Association, after three weeks of illness, died in Philadelphia, October 27. Funeral services were held in Holy Trinity Church in that city Saturday, October 29. The daughter of a physician, the wife of a physician, the mother of two physicians, the life and interests of Mrs. Freeman were closely allied to the medical profession. Her father was the late Dr. William Williams Keen of Philadelphia. The Woman's Auxiliary to the American Medical Association has lost an inspiring and able leader, the medical profession, an understanding and devoted friend.

An Appreciation

The Iowa Auxiliary momentarily bows in grief for the passing away of our beloved president of the National Auxiliary, Mrs. Walter Jackson Freeman, at her home in Philadelphia, October 27. Her good work for the national organization will live after her. On September 20, Mrs. Freeman came to Des Moines to meet with the executive board of the Iowa Aux-

iliary. Every item of the work she would have us do under her administration was carefully planned. Her enthusiasm and her unbounded faith in the women for whom, and with whom, she would work, is a pleasant memory that lingers with us. The president of the Iowa Auxiliary pledges her best efforts to carry on the work Mrs. Freeman would have had her do as a loving tribute to the memory of our deceased national president.

Mrs. P. B. McLaughlin, President.

INTERESTING NEWS In Brief

According to certain insurance statistics the death rate from cancer has increased about 75 per cent more in the last two years than it did in the 12 years preceding this period.

As aid to the Recreational Director in government hospitals there has recently been organized in Des Moines a volunteer service corps of the Red Cross to be known as the "Gray Ladies" Corps.

At a cost of \$450,000 a new pathology building is being added to the Boston City Hospital group.

The Medical Society of New Jersey through its house of delegates has recently adopted a plan for the certification of specialized practitioners.

Dr. A. A. Johnson of Council Bluffs has been re-appointed to the Iowa State Board of Medical Examiners, according to a recent announcement by Governor Dan W. Turner.

The Nebraska State Labor Commissioner has announced a reduction of 20 per cent to 25 per cent in medical fees for compensation cases, which took effect October 1st.

Because of the alarming increase in the number of cases of tuberculosis among the Winnebago Indians, the Indian Bureau has authorized the construction of a \$250,000 Indian Hospital at Winnebago, Nebraska.

The United States has already more physicians in proportion to its population than any other country in the world, and the tendency is for the number to increase.

According to a recent statement made by the American Medical Association 77 per cent of the patients in the Veterans' Hospitals are not service cases (that is, those whose injury or disease was caused by service in the army).

While over 89 hospitals in the United States and Canada were able to meet the requirements for approval of the American College of Surgeons in 1918, today 2,294 hospitals are so qualified and are approved by the College.

A recent announcement indicates that there are 101 students enrolled in the entering class in medicine at the University of Iowa, an increase of 22.7 per cent over the entering class of last year.

PERSONAL MENTION

Dr. A. T. Harris, formerly of Sioux City, and more recently of Sheldon, is leaving Iowa to locate in Gary, Indiana, where he will have charge of the x-ray and pathology laboratory in the Methodist Hospital.

Dr. Dean Harold King is locating in Spencer, coming directly from Providence, Rhode Island, where he has just completed his internship in the general hospital there. Dr. King was graduated from the State University of Iowa, College of Medicine, in 1930.

Dr. W. R. Brock, of Sheldon, attended a recent meeting of the Southwestern Minnesota Medical Society held at the new government Indian school and hospital at Pipestone, Minnesota, and read a paper on "Appendicitis in Children."

Dr. F. P. Ralston, who for the past year has been practicing medicine in Harvey, is preparing to move to Knoxville.

Dr. John W. Thornton, of Lansing, spoke before the Lansing Kiwanis Club, Monday, October 3, on the subject, "Don'ts for the Middle-Aged."

Dr. R. M. Chapman, who has practiced medicine in Bridgewater, for a year and a half, left recently for Cedar Rapids, where he will continue in his chosen profession.

Dr. Thomas U. McManus, of Waterloo, spoke before the philosophy and science division of the Women's Club, Tuesday, October 11, on the subject, "Scientific Medicine, Its Growth and Achievements."

Dr. P. M. Jessup, formerly of Fort Wayne, Indiana, has located in Muscatine, in the quarters occupied by the late Dr. A. J. Weaver, and plans to establish his practice there.

Dr. M. B. Galloway, of Webster City, was guest speaker at the meeting of the northwest section of the Iowa State Pharmaceutical Association, Wednesday, October 12, in Algona, speaking on "The Advantages of Closer Relation Between Physicians and Pharmacists."

Dr. and Mrs. Ivan T. Schultz have located in Humboldt where they will practice medicine. Both of them have just recently been graduated from the State University College of Medicine, and last year completed their internships in Grand Rapids, Michigan.

OBITUARIES

Sproule, Egbert Wilson, of Humboldt, aged fifty-five, died September 29, the immediate cause of death being a heart attack, although he had been in poor health for several months. He was graduated in 1905 from Queen's University Faculty of Medicine, Kingston, Ontario, Canada, and at the time of his death was a member of the Humboldt County Medical Society.

Hearst, William L., of Cedar Falls, aged sixty-four, died October 28 as the result of a sudden heart attack. He was graduated in 1897 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Black Hawk County Medical Society. Dr. Hearst for the past year has been councilor for the sixth district.

WILLIAM L. HEARST, M.D., F.A.C.S. 1868-1932

The many friends of Dr. Hearst were saddened by his sudden death on Friday evening, October 28. As a practitioner of thirty-five years in Cedar Falls, a faithful attendant at medical meetings, and as councilor for the sixth district, he had formed contacts that endeared him to his patients, professional colleagues and friends.

The writer first came to know him as a medical student at Iowa City, where he was graduated in 1897. Throughout his entire professional career he left the impression of stability of character, devotion to the best ideals of scientific medicine and the charm of a pleasing personality. He gained distinction in the field of surgery which was recognized by his election to fellowship in the American College of Surgeons. He dropped many a sprig of cheer and comfort along the pathway and he will always hold a bright spot in our memory.

W. L. Bierring.

LECTURES ON CANCER

A series of five illustrated lectures is announced by the Institute of Medicine of Chicago and the Cancer Research Committee of the Chicago Woman's Club, to be delivered by Max Cutler, M.D., Director Tumor Clinic, Michael Rees Hospital, in the Chicago Woman's Hall, 72 East Eleventh Street, Chicago. These lectures will cover the field of causation, prevention, early diagnosis, and treatment of cancer. The material presented will include in chronologic order the historical landmarks in the progress of the knowledge of cancer, a description of recently discovered contributing causes, and a review of the modern methods of treatment as practiced in the great cancer clinics of America and Europe. Special attention will be directed to the newer developments in the technic of Roentgen ray and radium, and the results of the modern treatment will be shown and

illustrated. The lectures will begin promptly at 8:15 o'clock and will last one hour.

Friday evening, November 4—Causes of Cancer and Its Prevention.

Friday evening, November 11—Early Diagnosis of Cancer.

Friday evening, November 25—Surgical Treatment of Cancer.

Monday evening, November 28—Radiation Treatment of Cancer.

Friday evening, December 2—Results of the Modern Treatment of Cancer.

ALPHA OMEGA ALPHA HONORS DR. WILLIAM W. ROOT

At a recent meeting in Chicago, the directors of Alpha Omega Alpha Honorary Medical Scholarship Society adopted the following resolutions in recognition of the eminent services of the late Dr. William W. Root, Slaterville Springs, New York, the founder of the society and secretary-treasurer since its organization in 1902:

1. That all stationery and official documents of the society bear the words, "Founded by William W. Root, 1902," and

2. That the annual lecture presented each year by a leading medical scientist, be known as the "William W. Root Alpha Omega Alpha Lecture."

The present officers of the society are: Walter L. Bierring, Des Moines, president; Austin A. Hayden, Chicago, vice president; Josiah J. Moore, 55 East Washington Street, Chicago, secretary-treasurer. Mrs. Root will continue as assistant secretary.

In addition to the officers, the directorate includes Ray Lyman Wilbur, Washington, D. C.; Waller S. Leathers, Nashville; Louis B. Wilson, Rochester, Minn., and Willard C. Rappleye, New York City.

The committee on extension and policy comprises Elias P. Lyon, Minneapolis, chairman; William Pepper, Philadelphia; Irving S. Cutter, Chicago; Frederick C. Waite, Cleveland, and Thomas C. Routley, Toronto.

ANNOUNCEMENT OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

At its meeting on October 8 the Board of Directors of the American Society for the Control of Cancer took the following action:

"It was voted that the *Bulletin* of the Society be made its official organ and that the present relationship between the Society and the *American Journal of Cancer* be discontinued."

The *Bulletin*, an eight-page periodical, published monthly by the American Society for the Control of Cancer, is issued for the information of members of the Society, and all others interested in cancer control. Pursuant to the action cited above, the *Bulletin* now in its fourteenth volume, becomes the official organ of the American Society for the Control of Cancer.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

DR. JOHN T. MCCLINTOCK, Iowa City

Keokuk as a Medical Center, 1850-1870

The city of Keokuk can claim distinction as the first medical center in Iowa by reason of being a pioneer in medical education, medical journalism and medical society organization.

Medical Education. The College of Physicians and Surgeons of the Iowa State University opened its first session in Keokuk on the first Monday in November, 1850. This is referred to as the third annual session of a medical school that seems to have had a change of name with each calendar year. It may be of interest to refer to the two preceding sessions held respectively at Rock Island, Illinois, and Davenport, Iowa.

The Rock Island Medical School was opened on November 7, 1848, and was a branch of the Madison Medical College of Wisconsin, the same teaching faculty officiating in both schools. The city of Rock Island then had a population of six to seven thousand, and is described as being the "natural crossroads of the upper valley." Two of the seven professorships were held by teachers who later became members of the Keokuk faculty, Dr. John F. Sanford, midwifery, residing then at Farmington, Iowa, and Dr. S. G. Armor, physiology, pathology and medical jurisprudence, of Rockford, Illinois. Reference is made to Dr. Armor having lectured the two previous winters at Rush Medical College, Chicago.

The following year the school became an independent institution under the name, College of Physicians and Surgeons of the Upper Mississippi, holding the session of 1849-1850 at Davenport, Iowa. Dr. Sanford is listed as professor of surgery, and the name of Dr. A. S. Hudson is noted as professor of obstetrics. He also was later associated with the Keokuk school. Two courses of sixteen weeks each were held beginning November 5, 1849, with commencement the first Wednesday in July, 1850. In the list of graduates appears the name of John F. Dillon, who later gained distinction as one of the leading jurists of the country.

The first faculty in Keokuk comprised Nichols Hard, M.D., anatomy; John F. Sanford, M.D., surgery; Samuel G. Armor, M.D., physiology, pathology and clinical medicine; A. S. Hudson, M.D., materia medica and therapeutics; D. L. McGugin, M.D., obstetrics and diseases of women and children; Samuel Adams, M.D., chemistry and pharmacy; and J. C. Hughes, M.D., demonstrator of anatomy.

In 1851 by legislative action, the college became the medical department of the Iowa State University, and in subsequent annual announcements it is so designated until 1868-1869 when the original name of College of Physicians and Surgeons at Keokuk was resumed. In 1869 the legislature established a medical department of the State University at Iowa City. A significant change is noted in the faculty of medicine at Keokuk in 1853 when Dr. John F. Sanford resigned and was succeeded by Dr. J. C. Hughes as professor of surgery. During a period of thirty years Dr. Hughes was the leading spirit and constant champion of the medical school. As a lecturer and teacher he had few equals and he gained wide fame as a skillful operator. During the war from 1861 to 1865 he was appointed surgeon general of the state by Governor Kirkwood. He organized and had charge of the army hospital at Keokuk, which was one of the largest in the west, having as many as 2,000 patients in the wards at one time. Dr. Hughes and Dr. W. F. Peck of Davenport were charter members of the American Surgical Association.

In 1853 Dr. Samuel G. Armor, professor of physiology, pathology and clinical medicine, resigned to accept a similar position in the Ohio Medical College of Cincinnati. In the college announcement of January, 1856, appears this statement, "It is designed to make the Iowa Medical College an instrumentality in improving the state of medical education in the west and to place it upon such a footing as to command the respect

of the profession at home and make it a creditable representation of our medical literature abroad."

Medical Journalism. The first number of the *Western Medico-Chirurgical Journal* was issued at Keokuk, Iowa, September 1, 1850. This was the first medical journal published west of the Mississippi and north of the Missouri river. The editors were Drs. Sanford and Armor, professors in the Faculty of Medicine. The salutatory states that "The object is to furnish to the profession a means that will facilitate an intercommunication of thought, an interchange of experience and observation, which will rapidly develop the energy and genius of the profession of the west, and connect them in a scientific brotherhood with the profession in those portions of our common country, where the light of truth, through the medium of the press, now shines with so much brilliancy."

The first volume which contains many interesting articles was completed in August, 1851. There is no available record of any further issues. Whether the retirement of both Dr. Sanford and Dr. Armor from the medical faculty in 1853 was a factor is not known.

In August, 1853, appeared the first number of Volume I of the *Iowa Medical Journal*, conducted by the Faculty of the Medical Department of the Iowa University. It was published monthly, the terms being "two dollars, in advance." The second volume, 1854-1855, was issued every alternate month and comprised in the six numbers, 480 pages as compared with 381 pages of the first volume. In Volume III, 1855-1856, the front page of each bimonthly issue states that the "*Iowa Medical Journal* is conducted by the Faculty of the College of Physicians and Surgeons of the Iowa University," indicating the tendency to vary the name of the school from time to time. The first number of Volume IV was not issued until May-June, 1857 and continued only through four numbers to June, 1858. The panic of 1857 and 1858 apparently had its depressing effect on medical publications in Iowa. The unsettled conditions of the country preceding and during the Civil War, and later, the absence of the editor in Europe, were further reasons given for delaying the publication of Volume V until November-December, 1867. Difficulties must again have arisen because the volume ended with number five in March-April, 1869, bringing to a close a highly creditable record of medical journalism in the city of Keokuk.

Medical Society Organization. The first local medical society in Iowa was organized in Keokuk on September 26, 1850, and was called the Medical Society of the City of Keokuk. The constitution adopted on October 3, 1850, bears the signatures

of J. Millard, D. L. McGugin, M. F. Collins, A. A. Hemenberg, B. N. Bond, Freeman Knowles, Jos. C. Hughes, E. R. Ford, J. Haines, John F. Sanford, Samuel G. Armor, Isaac Galland, and A. S. Hudson, all leaders in the profession of that period. The State Medical Library is the fortunate possessor of the complete minutes of the society, written in long hand, from the time of organization to the last recorded meeting, December 16, 1878. A few years later, the Keokuk Medical Society became the Lee County Medical Society.

The physicians of Keokuk also had a prominent part in the organization of the State Medical Society in Burlington, June 19, 1850. Dr. John F. Sanford is usually regarded as the father of our state society. Drs. Sanford, McGugin, Hughes, Ford and Haines were charter members. Of these Dr. McGugin was elected president in 1851 and Dr. Hughes was twice so honored, once in 1856 and later in 1865.

While the record is not continuous or complete, the annual announcements of the medical college, the issues of the two medical journals and the carefully kept minutes of the local medical society, give a story not only of medical development in Iowa during the pioneer period, but in the field of medicine elsewhere. It forms a historic background of fine achievement and devotion to the advancements of medical science in Iowa that will be a treasured heritage for all time.

WALTER L. BIERRING.

ADDITIONAL NOTES

In the monograph "Beginnings of Medical Education in and near Chicago," by George H. Weaver, M.D., 1925, frequent reference is made to the relation of early Iowa medical teachers to the development of Rush Medical College, Chicago. Dr. Samuel G. Armor delivered a course of lectures on physiology in 1846 and 1847 at Rush Medical College. Dr. Nichols Hard, professor of anatomy at Keokuk in 1850, was professor of obstetrics and diseases of women and children in the Medical Department of La Porte University from 1844 to 1850. This school was later merged with Rush Medical College. Dr. Hard died in 1851. Dr. Daniel Meeker was the originator of the La Porte school in 1842 and the leader in the faculty. In 1857 he was professor of anatomy in Keokuk for one year. Dr. George W. Richards, one of the early teachers in the middle west, was on the faculty of the La Porte school from 1844 to 1847. He was professor of theory and practice of medicine in the Rock Island Medical College in 1848, occupying the same chair when the school was moved to Davenport in 1849, and for one year in Keokuk. After leaving Keokuk in 1851 he moved to Dubuque, where he died in 1853.

In the August, 1857, issue of the *Iowa Medical Journal* appears this notice: "Dr. John H. Rauch, M. D., Burlington, Iowa, has been elected to the chair of *Materia Medica* and Therapeutics, and Dr. W. H. Byford, M.D., of Evansville, Iowa, to the chair of Obstetrics in Rush Medical College, Chicago. They will assume their teaching duties at the opening of the next term."

THE FIRST MEDICAL SCHOOL BUILDING

The accompanying illustration presents the first building erected in Iowa for the purpose of medical education. It was built as a part of the equipment of the College of Physicians and Surgeons of the Iowa State University which held its first session at Keokuk, in 1850-1851. The *Western Medico-Chirurgical Journal* carries this notice in the November issue, "Our new college building is about completed. It occupies a commanding and beautiful eminence in the southwest part of the city. When finished it will be a neat and tasty structure, conveniently arranged for purposes of medical instruction."

In the winter of 1851, the College of Physicians and Surgeons at Keokuk was by act of the General Assembly made a department of the university and an appropriation of \$5,000 for the immediate needs of the school granted. Some of this money, at least, was used to enlarge the original building as the same journal above referred to in the August, 1851, number describes the building which is evidently the one shown in the picture. The following is a description of the building written by the editor:

"Our Medical College

"With the means appropriated by the last General Assembly of our state, the dean of the faculty, some time since, placed under contract the necessary additions to our college edifice. The work is now progressing with great rapidity, and will certainly be completed by the opening of the next session. These improvements will give us one of the finest college buildings in the west. There will be three large lecture rooms, two of which will seat over three hundred and fifty persons, one about two hundred and fifty. The build-

ing is situated upon a beautiful and commanding eminence, and faces to the river with a front finished in the finest style of architecture, of one hundred feet. It is fifty feet deep and attached to the main wings is the University Hospital, erected and bountifully furnished by our generous city."

In a later issue of this journal a further editorial states: "The University Hospital as an essential auxiliary to the Medical College of this state has been completed by our city authorities and supplied with the necessary furniture. The capacity is eighty beds. The faculty of the College of Physicians and

Surgeons of Iowa University has exclusive control and management of this institution for ten years. Clinical reports will continue to appear in the *Journal*."

In the college announcement of 1867-1868, reference is made to "the facilities offered by the Hughes Eye and Ear Infirmary (forty beds) with all its new appliances directly imported from Europe."

Regarding the first legislative appropriation of \$5,000 in 1851 for the support of the medical department of the state university, these references are noted: In March, 1851, "The medical faculty now present their acknowledgment for this generous appropriation." Later there is a short notice suggesting that the governor vetoed the measure, but this is not definitely con-

firmed until in a search of the later files of the *Iowa Medical Journal*, an editorial by Dr. J. C. Hughes in February, 1869, refers to a visit to the old capitol at Iowa City in 1851. "Imagine my surprise to learn that the measure had been vetoed by the governor, claiming that the legislature had no right to favor by their appropriation for state funds, one class of medical men over that of another."

JOHN T. MCCLINTOCK.



THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE HEALING CULTS—A Study of Sectarian Medical Practice; Its Extent, Causes and Control—By Louis S. Reed, Ph.D.—(Publications of the Committee on the Costs of Medical Care: No. 16)—The University of Chicago Press, Chicago, 1932.—Price, \$2.00.

AN INTRODUCTION TO DERMATOLOGY—By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin.), Professor of Diseases of the Skin, University of Kansas School of Medicine, and Richard L. Sutton, Jr., A.M., M.D.—Visiting Dermatologist to the Kansas City General Hospital.—565 pages, with 183 illustrations.—The C. V. Mosby Company, St. Louis 1932.—Price, \$5.00.

THE MEDICAL CLINICS OF NORTH AMERICA.—New York Number, Vol. 15, Number 5, March, 1932. Published by W. B. Saunders Company, Philadelphia & London.

MODERN GENERAL ANESTHESIA—James G. Poe, M.D., Second Edition, Completely Revised and Enlarged.—231 pages with 12 illustrations and 2 charts. F. A. Davis Company, Philadelphia, 1932.—Price, \$2.50.

PAIN IN THE PLEURA, PERICARDIUM AND PERITONEUM—A Clinical Study.—By Joseph A. Capps, M.D., Professor of Clinical Medicine, University of Chicago; with the collaboration of George H. Coleman, M.D., Assistant Professor of Medicine, Rush Medical College; a foreword by Anton J. Carlson, M.D., Ph.D., Chairman of the Department of Physiology, University of Chicago.—99 pages, illustrated.—The MacMillan Company, New York, 1932.—Price, \$3.00.

PATHOLOGY FOR NURSES—By Eugene G. Piette, M.D.—251 pages, with 65 illustrations.—F. A. Davis Company, Philadelphia, 1932.—Price, \$1.75.

***PEDIATRIC EDUCATION**—White House Conference on Child Health and Protection. Committee on Medical Care for Children. Report of the Subcommittee on Medical Education. Borden S. Veeder, Chairman. Published by the Century Co., New York and London.

***THE PRACTICAL MEDICINE SERIES—General Medicine**, Edited by George H. Weaver, M.D., Lawrason Brown, M.D., George R. Minot, M.D., William B. Castle, M.D., William D. Stroud, M.D. and Ralph C. Brown, M.D.—Series of 1931.—The Year Book Publishers, Chicago.—Price, \$3.00.

* Book Review in this issue.

***THE PRACTICAL MEDICINE SERIES—General Surgery**, Edited by Everts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine.—Series of 1931.—The Year Book Publishers, Chicago.—Price, \$3.00.

THE PRACTICAL MEDICINE SERIES—General Therapeutics, Edited by Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, M.D., Instructor of Medicine, University of Illinois College of Medicine.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, \$2.25.

THE PRACTICAL MEDICINE SERIES—Neurology, Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College.—*Psychiatry*, Edited by Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado Medical School.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, \$2.25.

***THE PRACTICAL MEDICINE SERIES—Pediatrics**, Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School; with the collaboration of Arthur F. Abt, M.D., Assistant in Pediatrics, Northwestern University Medical School. Series of 1931. The Year Book Publishers, Inc., Chicago. Price, \$2.25.

***PULMONARY TUBERCULOSIS**—By Maurice Fishberg, M.D., Chief of the Tuberculosis Service, Montefiore Hospital and of its Country Sanatorium for Incipient Tuberculosis. Fourth Edition, Revised. Vol. I and II. Illustrated. Published by Lea & Febiger, Philadelphia, 1932. Price, \$15.00 set, 2 volumes.

***THE STORY OF MEDICINE**—From Medicine Man to Modern Physician. By Victor Robinson, M.D., Professor of History of Medicine, Temple University School of Medicine, Philadelphia. Albert and Charles Boni, New York, 1931. Price, \$5.00.

***A SURVEY OF THE MEDICAL FACILITIES OF THE STATE OF VERMONT**—By Allon Peebles, Ph.D. Publications of the Committee on the Costs of Medical Care No. 13.—Published by the University of Chicago Press.—Price, \$1.50.

***A TEXT-BOOK OF CLINICAL NEUROLOGY**—Clinical neurology, Columbia University, New York; attending neurologist, Neurological Institute and The Montefiore Hospital, New York City. Second edition, revised. Seven hundred fifty-nine pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$7.00 net.

***YOUR TEETH AND THEIR CARE**—By Carl W. Adams, D.D.S.,—141 pages, illustrated.—The C. V. Mosby Company, St. Louis, 1932.—Price, \$1.25

BOOK REVIEWS

PEDIATRIC EDUCATION

White House Conference on Child Health and Protection. Committee on Medical Care for Children. Report of the Subcommittee on Medical Education. Borden S. Veeder, Chairman. Published by the Century Co., New York and London.

In its study of the present status of pediatric education in this country the committee sent questionnaires to 3,569 pediatricians or physicians especially interested in pediatrics, to 1,059 men in general practice in communities under 50,000, and to sixty-three medical schools.

The replies received are tabulated and their significance discussed under the headings of Pediatrics and the Physician, Undergraduate Education, Postgraduate Education, and Recommendations.

L. F. H.

THE PRACTICAL MEDICINE SERIES

General Medicine, Edited by George H. Weaver, M.D.; Lawrason Brown, M.D.; Geo. R. Minot, M.D.; William B. Castle, M.D.;

William D. Stroud, M.D., and Ralph C. Brown, M.D. Series of 1931. The Year Book Publishers, Chicago. Price, \$3.00.

For many years this series of publications by the Year Book Publishers has been widely received by the medical profession. The hearty reception with which these books are met year after year bespeaks their popularity and authoritative character. They have well stood the test of time which would have required the withdrawal of a less excellent treatise having for its purpose a recapitulation or summary of the year's advances in the various branches of medical practice.

The 1932 volume on medicine covers a wide scope of medical interests, presenting such subjects as undulant fever, tularemia, psittacosis, poliomyelitis, and encephalitis in terms of modern phrenic knowledge. Among the diseases of the chest, tuberculosis maintains the center of the stage, while in the consideration of blood diseases, pernicious anemia and its modern management has received greatest attention. Because of the increasing frequency of the condition, the section dealing with the diseases of

the heart and blood vessels is outstandingly important.

For the busy physician who is unable to keep abreast the many publications dealing with medical observation and research, this volume will be most welcome.

THE PRACTICAL MEDICINE SERIES

General Surgery, Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine. Series of 1931. The Year Book Publishers, Chicago. Price, \$3.00.

The surgical literature of 1931 contains many articles on fundamentals. The questions of thrombosis and embolism are discussed in several interesting statistical studies. In this connection the article by Willinsky on the rise of blood platelets after operation will be found of interest because of its relation to the question of thrombosis.

The article by Baer on his method of treating osteomyelitis by maggots will also prove to be of value.

Several important contributions have been made on the healing rate of operative wounds produced by electrosurgical methods, and surgical shocks have received much additional attention during the year. In discussing spinal anesthesia, Brunn and Brill indicate that as a result of their study it is their belief that pulmonary complications occur much more frequently following this type of anesthesia than other standard types.

Berry's article on the unfavorable results of phrenicotomy is also timely.

This volume of nearly eight hundred pages is devoted to a critical review of the current literature in the field of surgery, and discusses almost every phase of general and special surgery, setting forth the newer findings in each particular field, and suggesting newer thoughts in methods of management or treatment. The volume is well illustrated.

THE PRACTICAL MEDICINE SERIES

Pediatrics, Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School; with the collaboration of Arthur F. Abt, M.D., Assistant in Pediatrics, Northwestern University Medical School. Series of 1931. The Year Book Publishers, Inc., Chicago. Price, \$2.25.

In this small volume of 552 pages are gathered together abstracts of the more important pediatric articles which have appeared in the world's literature for the year. The content of the book is arranged in the fashion of any text book on pediatrics, beginning with Diseases of the New-Born and continuing with Infant Feeding, Nutrition and Nutritional Diseases, etc. It is apparent that one of the objectives of the authors has been to present the latest development in the knowledge of the subject under discussion. Thus, the book really serves as an up-to-date supplement of the modern pediatric text book.

Another feature which adds greatly to the value of this particular volume is the unusual familiarity of the authors with the foreign literature. The foreign viewpoint on nearly every subject is given equal consideration along with the American viewpoint.

I should say that this book edited by the Doctors Abt provides the easiest method available for one to familiarize himself with the world's pediatric literature for the past year.

L. F. H.

PULMONARY TUBERCULOSIS

By Maurice Fishberg, M.D., Chief of the Tuberculosis Service, Montefiore Hospital, and of its Country Sanatorium for Incipient Tuberculosis. Fourth Edition, Revised. Vol. I and II. Illustrated. Published by Lea & Febiger, Philadelphia, 1932. Price, \$15.00 set, 2 volumes.

With a background of experience extending over a period of thirty years in dealing exclusively with the problem of tuberculosis, the author of this comprehensive treatise stands in authoritative position in discussing pulmonary tuberculosis. This book, now in its fourth edition, has been exceptionally well received, which bespeaks its thoroughness and usefulness to specialists and general practitioners alike. In the present edition, most of the chapters have been completely rewritten and much new material has been added. Every phase of the problem of tuberculosis has been considered, although the author appears to have stressed chiefly symptomatology and treatment. Since it is accepted that the recognition of this disease must, in most instances, be made or at least suspected by the family physician, it appears very timely that this author should particularly emphasize early diagnosis. Over three hundred pages are devoted to a general consideration of diagnosis and another two hundred pages to a consideration of the diagnosis of special forms of tuberculosis. The treatment recommended in the book is based upon many years' experience with patients both in the sanatorium and the home. The author evaluates the benefit to be gained by each form of treatment, and concludes that "careful home treatment is productive of immediate and ultimate results equal to those of institutional treatment, and is less costly to the patient and to the community." This new edition is published in two volumes and is well illustrated and well indexed.

J. H. P.

THE STORY OF MEDICINE

From Medicine Man to Modern Physician. By Victor Robinson, M.D., Professor of History of Medicine, Temple University School of Medicine, Philadelphia. Albert and Charles Boni, New York, 1931. Price, \$5.00.

During the past two years, great interest has been manifest in the study of medical history. If an active interest in the subject of medical history is maintained, it is necessary that the average reader

be furnished with a history which is not only a volume of reliable data, but also a volume which is highly and compellingly interesting. With the publication of "The Story of Medicine" by Victor Robinson, medical history becomes a source of delight and enchantment.

Beginning with the medicine in the Stone Age, the writer by vivid description and brilliant style, carries his reader through the various unfoldings of medical thought and development. The volume, contrary to precedent, it is not written about dates and persons, but rather written about those great truths and discoveries in medicine which have played such an important part in the development of medical science as it is today.

Of the style, the following quotation will serve as an example: "In the summer of 1835, a young doctor in South Carolina tore the tin sign from his office door, and dropped it in an abandoned well. His practice had consisted of two patients, both babies, and both had died. * * * Ten years later this man thought, 'If there is anything I hate, it is investigating the organs of the female pelvis.' He invariably informed gynecological cases, 'This is out of my line.' So little did James Marian Sims know of himself."

To the seasoned student of medical history, the volume will present many old facts newly adorned; to the uninitiated or less advanced student, the volume combines both medical facts and those little incidents of human interest which serve so faithfully to impress upon our minds many of those less romantic facts of medical development upon which the science stands.

A SURVEY OF THE MEDICAL FACILITIES OF THE STATE OF VERMONT

By Allon Peebles, Ph.D. Publications of the Committee on the Costs of Medical Care, No. 13. Published by the University of Chicago Press. Price, \$1.50.

This volume covers just the state of Vermont, and is a masterpiece in the detail and information given to the Committee on the Costs of Medical Care, for the year of 1929.

It took six field workers six months of intensive work to compile the information given, which covers physicians, dentists, nurses, osteopaths, optometrists, chiropractors, drug stores, hospitals, public health, medical care for rural families and two intensive surveys of Franklin and Orange counties.

It is interesting to note that there are only 86 partial specialists and 40 complete specialists in the state.

Physicians in private practice spend about 74 hours of the normal week in professional activity; over one-fifth spend more than 85 hours a week and about one-tenth spend 50 hours or less. Five per cent netted less than \$1,000, 14 per cent less than \$2,000, 24 per cent less than \$3,000, 14 per cent less than \$4,000, and 11 per cent less than \$5,000.

It cost 38.6 per cent of the gross income for total

expenses in maintaining a practice of which the largest item is 12 per cent—automobile operation. Forty-six per cent of the doctors estimated that they failed to collect 1 to 19 per cent of their accounts, 38 per cent lost 20 to 39 per cent and 8 per cent lost 40 per cent or more.

The reviewer feels that this volume is particularly worth while. The combined compilation of all the states worked out in such a methodical manner would be a very valuable contribution to medical economics.

A TEXT-BOOK OF CLINICAL NEUROLOGY

By Israel S. Wechsler, M.D., professor of clinical neurology, Columbia University, New York; attending neurologist, Neurological Institute and The Montefiore Hospital, New York City. Second edition, revised. Seven hundred fifty-nine pages with 142 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$7.00 net.

Dr. Wechsler in this revision has achieved a complete and entirely up-to-date book of clinical neurology. The arrangement of material is simple and practical, according to anatomic rather than etiologic or pathologic divisions.

The entire work, but particularly the chapters on: spinal fluid with an excellent differential diagnosis chart; brain tumors with the newer pathologic classification and the salient points of encephalography and; the epilepsies including narcolepsy, shows the effect of the most recent developments in these fields. An adequate bibliography follows each section.

The author has wisely avoided general psychiatry but includes a useful section on psychometry giving all the necessary information for mental age testing according to the most approved methods and he also devotes a chapter to a scholarly discussion of the neuroses and their conception from pathologic, physiologic, behavioristic and psycho-analytic viewpoints. The classification, symptomatology and treatment of the neuroses is handled briefly but in the most approved and modern psycho-analytic manner.

R. C. D.

YOUR TEETH AND THEIR CARE

By Carl W. Adams, D.D.S. 141 pages, illustrated. The C. V. Mosby Company, St. Louis, 1932. Price, \$1.25.

This book answers the many questions frequently asked by the public in regard to dental procedure. It meets a growing demand for an intelligent knowledge of the structure and care of the teeth and mouth as well as the nature and prevention of the diseases to which they are subject. It stresses the importance of preventive dentistry, explaining the need for many of the common dental procedures.

The volume is written in a non-technical fashion, which makes it especially valuable for the layman who is interested in the problem of dental hygiene.

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THE VALUE OF THE ELECTROCARDIOGRAPH IN THE DIFFERENTIAL DIAGNOSIS OF HEART DISEASE*†

LAURENCE E. COOLEY, M.D., Dubuque

In the middle of the nineteenth century it was shown that electric currents are produced by each contraction of the heart. Thirty years ago Einthoven invented the string galvanometer, an instrument capable of measuring these minute currents. Today the electrocardiograph affords a means of accurate diagnosis of the irregularities of the heart as well as being an important aid in the diagnosis and treatment of other cardiac diseases.

Before discussing abnormal electrocardiograms I will briefly review the characteristics of the normal electrocardiogram. The electric currents produced by the heart beat are collected by means of electrodes placed on each arm and on the left leg. The currents are recorded between the right arm and the left arm (called Lead I); between the right arm and left leg (Lead II) and between the left arm and the left leg (Lead III). Thus a composite picture is obtained by collecting the currents in three directions. When the various parts of the heart contract these electric currents cause the string galvanometer to move. The movements are photographed as waves or spike-like deflections. Each wave is characteristic for the different parts of the heart. The electrocardiograms are made so that each horizontal millimeter represents .04 second and each vertical millimeter represents .1 millivolt. Thus waves from different electrocardiograms can be compared. The auricular contraction or P wave is a small rounded curve .1 to .2 millivolt in height and from .06 to .10 second in duration. It is followed by an interval of no movement of the galvanometer representing the time necessary for the impulse which

initiates ventricular contraction to travel from the auricle to the ventricle. This interval normally lasts from .06 to .14 second. A series of spike-like deflections called the QRS complex follows, lasting from .06 to .10 second and representing the spread of the impulse through the intraventricular septum and ventricular muscle. The Q wave is small or absent and goes below the baseline. The R wave is from .6 to 2.4 millivolts in height and goes above the baseline. The S wave is of variable size or absent and goes below the baseline. Following another quiet interval comes the T wave which represents ventricular contraction. It is a peaked, upright wave varying from .2 to .8 millivolt in height and from .10 to .20 second in duration. Alterations in the character or sequence of the waves constitute a pathologic electrocardiogram.

The electrocardiogram has shown us that there are many different irregularities of the heart beat. Respiratory sinus arrhythmia is an irregularity in which the heart rate is increased during inspiration and decreased during expiration. There is also a phasic sinus arrhythmia, not related to respiration, in which the heart rate is increased and decreased in periods of some seconds. Both of these arrhythmias are physiologic and are dependent on changes in the tone of the vagus nerve. They occur in normal hearts, most frequently in children. There are no clinical symptoms associated with these irregularities. The rhythm at the apex and the pulse is the same in contradistinction to extrasystoles. Exercise generally abolishes the sinus arrhythmias. Occasionally these irregularities are so exaggerated as to simulate auricular fibrillation or partial heart block. In the electrocardiogram the P, QRS and T waves are normal and retain a constant relationship to each other. (See figure I, normal electrocardiogram. Respiratory sinus arrhythmia can be seen in Lead III.)

Auricular fibrillation is one of the most frequent and serious of the irregularities of the heart. In auricular fibrillation the regular contractions

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†Presented before the Finley Hospital Staff, Dubuque, Iowa, May 17, 1932.

of the auricle are replaced by rapid irregular contraction waves circulating in a haphazard fashion. The ventricle responds irregularly to these contractions, the ventricular rate being 60 to 200 contractions per minute. Auricular fibrillation occurs mainly in association with three heart conditions, (a) chronic rheumatic heart disease, generally with decompensation, (b) an elderly group with no common etiologic factor and (c) hyperthyroidism. It may also occur with syphilis, pneumonia, coronary thrombosis and after operations. The symptoms of auricular fibrillation are dependent on the amount of cardiac embarrassment. Usu-

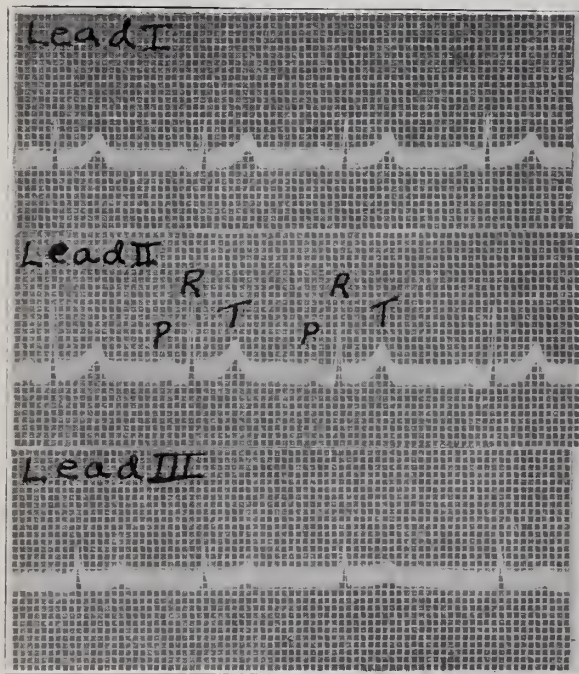


Figure I.

Normal Electrocardiogram. A slight sinus arrhythmia can be seen in Lead III.

ally the patient complains of dyspnea and palpitation. Cyanosis, edema, ascites, passive congestion of the liver and lungs may or may not be present. Auricular fibrillation can generally be recognized clinically by the absolute irregularity in strength and in time of the beats, by the difference in the rate at the apex and the wrist and because it is usually more pronounced with exercise. The electrocardiogram of auricular fibrillation is characterized by the small, rapid, irregular "f" waves appearing between the ventricular complexes. The ventricular complexes also appear at irregular intervals.

Case I. The patient was a clerk, aged forty-one, who complained of heart consciousness, dyspnea, edema, cough, orthopnea and loss of appetite for a period of four weeks. Past history: The patient had

had "rheumatism" when a boy and knowledge of "leakage of the heart" for twenty years. Physical examination: His lips were cyanotic; the teeth in poor repair; the tonsils small and reddened; the throat slightly injected. The apex beat was palpable in the sixth interspace anterior axillary line. Left heart border; sixth interpace, anterior axillary line; pre-systolic thrill and murmur; irregularity of force and timing of the beats; apex rate 102, pulse rate 76, blood pressure 150/100. The liver was three fingers below the costal margin. The extremities showed slight pitting edema over the tibiae. Electrocardiogram: (see figure IIa) The P waves were replaced by rapid irregular "f" waves; ventricular complexes irregularly spaced; ventricular rate 98 per minute. Diagnosis: Auricular fibrillation. This was a typical case of an old rheumatic endocarditis with auricular fibrillation and decompensation.

Auricular flutter is much like auricular fibrillation. Most cases of flutter fibrillate eventually if the irregularity continues. There is a regular rapid wave of contraction in auricular flutter, the so-called "circus movement" around a ring of auricular muscle. The impulse spreads from this ring through the rest of the auricle and into the ventricles. The rate of the auricular contraction is usually about 300 per minute. The ventricles contract regularly, generally to every second, third or fourth beat of the auricle. Auricular flutter occurs for the most part in elderly people. It is also found with chronic rheumatic heart disease and in cases of cardiac enlargement not due to high blood pressure. It may occur in hyperthyroidism, lues, sclerosis of the coronary arteries and in acute infections. The symptoms of auricular flutter, like those of auricular fibrillation, depend on the amount of embarrassment caused the heart. In the presence of a heart rate of about 150 per minute that does not change with exercise, one can suspect auricular flutter, but it is not possible to differentiate it from the other tachycardias except by the electrocardiogram or polygram. In the electrocardiogram of auricular flutter one sees small, rapid, rhythmic waves between the ventricular complexes.

Case II. The patient was a laborer, aged fifty-seven. His present complaint was substernal pain and dyspnea on exertion for one month. The physical examination showed the chest to be emphysematous, with fine dry râles in both lung bases. Left heart border; anterior axillary line, the rate 70 per minute, no murmurs, blood pressure 154/84. Electrocardiogram: (see figure IIb) auricular rate 272, ventricular rate 69, 4:1 block (approximately). Diagnosis: auricular flutter. This patient had anginal attacks, the basis of which, apparently, was sclerosis of the coronary arteries and resulting ischemia to the muscle. Auricular flutter was not suspected on physical examination.

Extrasystoles or premature contractions fre-

quently cause an irregularity of the heart. They are characterized by (a) appearance before the normal beat that would continue the regular rhythm (b) the ectopic origin and (c) frequently a compensatory pause follows the extrasystole. They are divided into auricular, nodal and ventricular extrasystoles as determined by the electro-

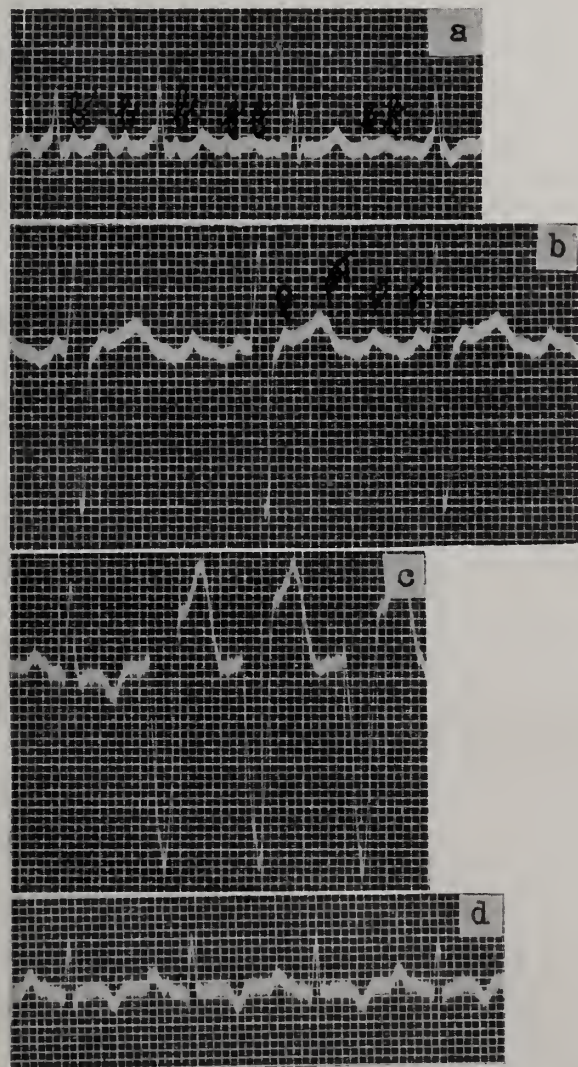


Figure II.

- (a) Auricular Fibrillation (Lead I).
 (b) Auricular Flutter (Lead II).
 (c) Paroxysmal Tachycardia, ventricular type. (A normal beat precedes the paroxysm of extrasystoles). (Lead I).
 (d) From the same patient as (c). Taken between paroxysms. Note the inversion of the T wave, indicating myocardial changes. (Lead I).

cardiogram. Although extrasystoles are considered harmless in themselves, the patient should be given the benefit of a thorough heart examination, since extrasystoles may be the only sign of serious cardiac disease. They become increasingly common as age advances, due to sclerosis of the coronary arteries, causing inadequate circulation. They appear frequently in acute infections, luetic

and other types of myocarditis. Auricular and nodal extrasystoles are often found in apparently normal hearts. In many cases they seem to depend on psychic disturbances. Auricular extrasystoles, seen frequently in mitral stenosis, are considered by East and Bain¹ to be warning signs of impending auricular fibrillation and decompensation. Occasional ventricular extrasystoles coming from only one focus may also be found in hearts that are apparently normal. They occur frequently after coronary thrombosis. In cases of aortic valvular disease or in hypertension frequent extrasystoles point to pathology in the left ventricle. Multiple extrasystoles from many foci rarely occur in hearts that are otherwise normal. Drugs, tea, coffee, tobacco and alcohol frequently initiate extrasystoles. Palpitation may be the only symptom associated with extrasystoles. They can be recognized by the premature contraction which can be heard over the precordium. The impulse from a premature contraction is not often transmitted to the wrist. A compensatory pause frequently follows. In the electrocardiogram the auricular extrasystole is recognized by (a) the premature appearance of the P wave, (b) the abnormal shape of the P wave and (c) the normal appearance of the QRS and T waves. The nodal extrasystole, which arises in the tissue of the septum, is like the auricular extrasystole except that if the P wave appears at all, it comes after the QRS waves. The ventricular extrasystole has no P wave, the QRS is abnormally wide and slurred and the T wave is in the opposite direction from the QRS. (See figure IIc for example of ventricular extrasystole.) Most investigators believe that one can determine whether the ventricular extrasystoles arise in the right or left ventricle by means of the electrocardiogram. Investigations by Barker and associates², recently confirmed by Lundy³, indicate that the so-called right ventricular extrasystoles come from the basal part of the heart and the left ventricular extrasystoles from the apical region.

Paroxysmal tachycardia is the sudden acceleration of the heart rate due to a rapid succession of premature contractions. The various types of paroxysmal tachycardia are auricular, nodal and ventricular and are determined by means of an electrocardiogram. Paroxysmal auricular tachycardia occurs more frequently in apparently normal hearts than does paroxysmal ventricular tachycardia. Strauss⁴ found cardiac disease in four-fifths of his cases of ventricular tachycardia. Syncope, temporary blindness, epileptiform convulsions, cyanosis and edema are frequently observed. There is usually a pronounced fall in blood pressure. Clinically one can suspect par-

oxysmal tachycardia when there is a rate of 150 to 250 beats per minute which appears and ends suddenly. One must differentiate paroxysmal tachycardia from simple tachycardia. An electrocardiogram is often necessary to distinguish paroxysmal tachycardia from auricular flutter or fibrillation, both of which may occur in paroxysms. The immediate prognosis in auricular and nodal paroxysmal tachycardia is generally good. In the ventricular type the prognosis must be more guarded because of the possibility of ventricular fibrillation and death. The obvious relationship between paroxysmal tachycardia and extrasystoles should make one cautious in saying that extrasystoles are harmless, especially if they are frequent and of the ventricular type.

Case III. The patient was a boy aged sixteen. Present complaint: tachycardia of six months duration, dyspnea on exertion, swelling of ankles for three months, frequent sore throats during the last three months. Physical examination: Temperature 98.0; throat slightly injected; tonsils small, imbedded; crepitant râles in both lung bases posteriorly; heaving apex impulse; left heart border, two centimeters to left of midclavicular line; soft systolic murmur at apex, gallop rhythm, rate 110, pulse rate 55, blood pressure 116/96. Extremities, slight pitting edema. Wassermann test, blood and urine analyses were all negative. Electrocardiogram (figure IIc): Short paroxysms of ventricular tachycardia. Second tracing (figure IIId), taken between attacks, normal rhythm, T wave in Lead I inverted, myocardial involvement.

In this case it was obvious that the heart was seriously damaged. The myocardium or endocardium were almost certainly involved, but there were not enough clinical findings to make a diagnosis other than that of paroxysmal ventricular tachycardia.

Heart block is an irregularity of much clinical significance. There are two types, partial and complete. Partial heart block is due to the failure of part of the impulses from the auricle to reach the ventricle. Sometimes the ventricle contracts after every second, third or fourth auricular beat. This is known as 2:1, 3:1, or 4:1 block. Complete heart block is due to the total failure of the impulses from the auricle to reach the ventricle. The ventricles set up a contraction rhythm of their own, generally very slow. Heart block is associated with a variety of clinical conditions, such as diphtheria, lues, endocarditis, coronary thrombosis, local fibrosis due to obliteration of the coronary arterioles, vagal stimulation and drugs. It rarely occurs with a congenital defect of the intraventricular septum. A transitory partial heart block indicates an acute heart lesion or poisoning. It is one of the few reliable signs of invasion of the cardiac muscle in cases of early rheumatic

heart disease. In outstanding cases of heart block the Stokes-Adams syndrome may appear, the characteristics of which are loss of consciousness, cyanosis, convulsions and a ventricular rate often under twenty beats per minute. In less pronounced cases the patient may complain of faintness, giddiness, profuse perspiration and heart consciousness. In partial heart block palpitation may not even be noticed by the patient. The important physical sign of partial heart block is the "dropping out" of a beat. One hears no contraction over the precordium in contradistinction to extrasystoles. If the heart rate is slow enough one may see the regular auricular waves in the jugular vein and the "dropping out" of some of the ventricular waves in the carotid artery. When

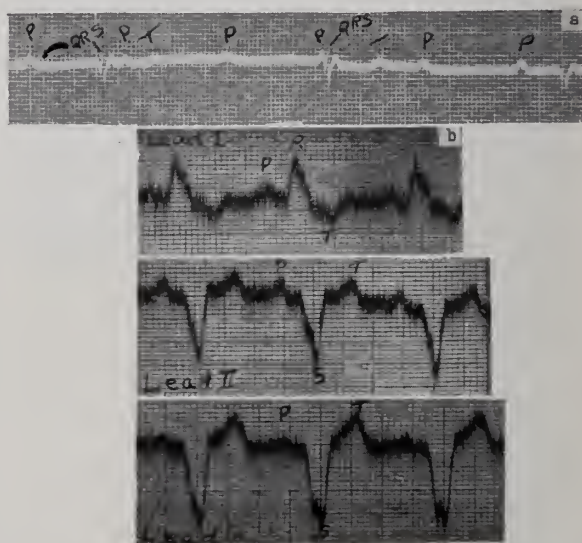


Figure III.

(a) Complete Heart Block. (Auricular rate 68; ventricular rate 31.)
(b) Right Bundle Branch Block.

complete heart block is present the ventricular rate is generally very slow. Any rate under 35 beats per minute is almost invariably due to heart block. The auricular waves in the jugular veins may be seen to have an entirely different rhythm than the ventricular waves in the carotid artery. Also the auricular systoles may be heard over the sternum. In partial heart block the electrocardiogram shows a gradual lengthening of the P-R interval until finally a P wave appears which is not followed by the ventricular complex. The next P-R interval is of shorter duration but the ones following are increasingly prolonged again. Sometimes one sees a prolonged P-R interval that remains constant with no "dropped" beats. Partial heart block may develop later in these cases. In complete heart block the P waves appear at regular intervals, generally 60 or more per minute, while the QRS

and T waves have an unrelated rhythm, usually 35 or less per minute.

Case IV. The patient was a salesman, aged sixty-seven. Present complaint: Loss of consciousness, epileptiform seizures. Past history: Acute sciatica two months previously. Physical examination: The patient was acutely ill, with cyanotic lips, and fine, moist râles in both bases of the chest. The left heart border was two centimeters to the left of the mid-clavicular line. The heart rate was 80 beats per minute, regular, with no murmurs. The blood pressure was 142/56. The extremities showed pitting edema of the ankles and tortuous vessels which did not collapse. (This patient had previously been given barium chloride for heart block and the signs of decompensation developed with this therapy.) After rest in bed and digitalis, the edema disappeared and the heart rate became very slow, from 28 to 35 beats per minute. The auricles could be heard to beat independently of the ventricular contractions. The electrocardiogram (figure IIIa) at this time showed a complete heart block. This is a case of complete heart block due to sclerosis of the coronary arteries with the typical Stokes-Adams syndrome. During these attacks of unconsciousness the heart rate was as low as eight beats per minute.

During the routine electrocardiographic examination of patients with or without cardiac symptoms one not infrequently sees a pronounced widening and slurring of the QRS complex. The T wave is in the opposite direction from the QRS and follows it immediately instead of a pause intervening. These findings are known as bundle branch block and are due to an injury of one of the branches of the tissue which conducts the contraction impulses from the auricle to the ventricle. The bundle to either the right or the left ventricle may be injured. This can be determined by means of the electrocardiogram. Bundle branch block is associated with myocarditis of acute rheumatism, acute infections, lues, sclerosis of the coronary arteries, high blood pressure and coronary thrombosis. It always indicates involvement of the myocardium, either acute or chronic. The death rate in patients with bundle branch block is extraordinarily high. Patients may complain of cardiac symptoms such as dyspnea, palpitation or precordial pain. One can suspect bundle branch block when there is a splitting of the first sound. This is not a constant finding, however. King⁵ claims to make the diagnosis clinically by palpating a splitting of the apex beat. Many good clinicians are unable to verify this finding. The electrocardiogram may be the sole evidence of cardiac disease in bundle branch block. In left bundle branch block the QRS in Lead I is inverted and in Lead III it is upright. In right bundle branch block the QRS in Lead I is upright and in Lead III it is inverted.

Wilson and his associates^{2 and 6} maintain that the so-called right bundle branch block is really a block of the left bundle and that the so-called left bundle branch block is really a block of the right bundle. A prolongation and notching of the QRS is called an arborization branch block. It is probably a form of bundle branch block in which the site of lesion cannot be determined by means of the electrocardiogram.

Case V. The patient was a woman aged thirty-five. Present complaint: Precordial pain on exertion, six months duration; loss of weight, four months duration. Past history, negative. Physical examination: The patient was very thin and extremely nervous. Her head and neck were negative, the lungs were negative. The left heart border was two centimeters to the left of the midclavicular line. The right heart border, at the fourth interspace, was two centimeters from the edge of the sternum. There was gallop rhythm, with a rate of 70, and no murmurs. The blood pressure was 128/90. The abdomen and extremities were negative. Electrocardiographic diagnosis was right bundle branch block.

Coronary thrombosis has become a definite clinical entity during the past twenty years. It is certain that one sees evidences of coronary thrombosis in the autopsy room much more frequently than the diagnosis is made clinically. The first and most striking symptoms are persistent precordial pain without exertion, urgent dyspnea, and impending fear of death. Irregularities of the heart, pericardial friction rub, fever, leukocytosis and fall in blood pressure help to verify the diagnosis. Often the pain is in the upper abdomen with nausea and vomiting simulating a perforated ulcer. Sometimes there is no pain, only dyspnea. The electrocardiogram in coronary thrombosis is pathognomonic in many cases. In tracings taken shortly after the attack the T wave in one or more leads swings off directly from the R or S wave instead of returning to the baseline. After a period of days to weeks the T wave comes off nearer the baseline and gradually becomes inverted. The inverted T wave is rounded and crescent shaped. Later the T wave may become upright, apparently coincidental with repair and resumption of the normal contraction process in the ventricles. When one finds this series of changes taking place in the electrocardiogram one can be sure that there has been a coronary thrombosis. If a tracing is taken some time after an attack one may see only an inversion of the T wave.

Case VI. The patient was a woman aged forty-eight. Present complaint: Severe precordial pain which came on a month before, while the patient was in bed and lasted for several days. The patient was brought in only for an electrocardiogram and no examination was made. Electrocardiogram (figure

IVa) high R-T take-off in Leads I and II, six weeks later, (figure IVb) T wave beginning to invert.

Case VII. The patient was a watchman, aged sixty-three. Present complaint: Dyspnea on exertion for two weeks, precordial pain for one week. The past history was negative. Physical examination: dental caries was present, the lungs and heart were negative. The abdomen and extremities were negative. Blood pressure was 172/90. Electrocardiogram: (figure IVc) T wave inverted; three months later T wave diphasic (figure IVd); seven months later T wave upright (figure IVe).

One sees coronary thrombosis frequently initiating anginal attacks. Nitroglycerine, 1/100 gr., gave the patient relief from his precordial pain. It is probable that he had an occlusion of one of the smaller arteries and a collateral circulation

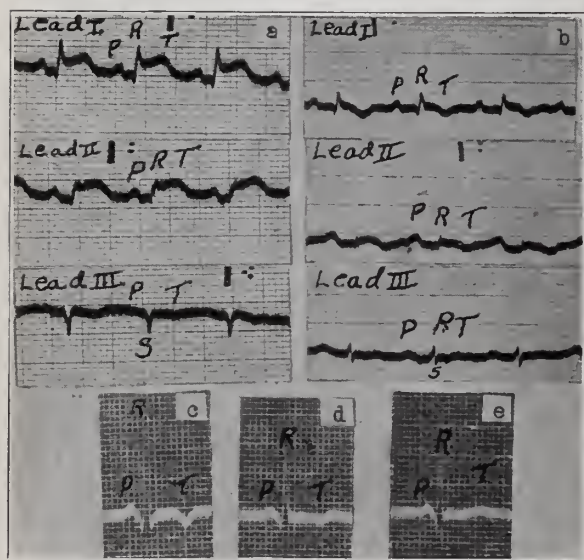


Figure IV.

- (a) Coronary Thrombosis. Note high R-T take-off. (Leads I and II.)
- (b) Same patient as in (a) taken six weeks later. Note the inversion of the T wave in Leads I and II.
- (c) Coronary Thrombosis. Note the rounded, inverted T wave. (Lead I.)
- (d) Same patient as in (c) taken three months later. Note the difference in the T wave. (Lead I.)
- (e) Same patient as in (c) and (d) taken four months later than (d). T wave is now upright.

was readily established. Sutton⁷ recently declared that cardiac pain is caused by ischemia or anoxemia of the heart muscle. In some cases of coronary thrombosis one finds only irregularities in the electrocardiogram, including extrasystoles, heart block, auricular fibrillation or flutter. One may see a prolongation of the QRS complex, a very low excursion of the QRS and T complexes or a bundle branch block. If any of these findings are seen in a patient over forty years of age with a suspicious history, one must always strongly consider coronary thrombosis.

It has been noted that an increase in the height

of the T wave occurs in hyperthyroidism. Hamburger⁸ found that the T wave decreases in size following iodine therapy and thyroidectomy. Zondek⁹ and others have reported signs of cardiac failure associated with myxedema. In the electrocardiogram the P and T waves are small or inverted. These waves become normal and the cardiac failure disappears with thyroid therapy.

It has been found that a change in the direction of the major initial deflection of the QRS waves is associated with a greater hypertrophy of one of the ventricles than of the other. This is only true when it is known from other evidence that the heart is enlarged. The electrocardiogram may show the same changes when there has been an anatomic shifting of the heart, changing its electrical axis. Short, fat men with transverse hearts frequently have this type of electrocardiogram. The QRS in Lead I is upright and in Lead III inverted in preponderance of the left ventricle (see figure IVa). The QRS in Lead I is inverted and in Lead III upright in preponderance of the right ventricle. Left ventricular preponderance is seen in lesions of the aortic valve, hypertension and hyperthyroidism. Right ventricular preponderance is seen in cases of mitral stenosis, most congenital lesions, and sclerotic changes in the pulmonary arteries. With the electrocardiogram one can differentiate the congenital from the acquired dextrocardia. In congenital dextrocardia all of the waves in Lead I are inverted while Leads II and III are transposed. In acquired dextrocardia the electrocardiogram is normal or shows only a shifting of the electrical axis. It is possible to make a diagnosis of myocardial involvement from the electrocardiogram. The findings are: a slurring or notching of the QRS in two leads, inverted or diphasic T in one or more leads exclusive of Lead III (normal hearts show an inversion of the T wave in Lead III in about 25 per cent of the cases), low excursions of the QRS or T waves in all leads, and a Q wave in Lead III that is greater than 25 per cent of the highest R excursion.

DISCUSSION

The electrocardiograph is not without its limitations. A normal electrocardiogram does not necessarily mean a normal heart. Myocardial involvement may be interpreted as myocardial damage only in conjunction with the clinical picture. The amount of myocardial involvement may not correspond to what is seen in the electrocardiogram. One cannot determine whether the involvement is acute or chronic from the electrocardiogram. Physiologic changes can easily be confused with minor changes in the QRS and T

waves. Digitalis can produce changes in the QRS and especially in the T wave which can be mistaken for myocardial involvement. It is not possible to make a diagnosis of valvular disease from the electrocardiogram. It is, as all other mechanical means in medicine, only an aid in making the diagnosis.

Nevertheless, it is invaluable in many cases. Bacon, Kretschmer and Woodruff¹⁰ took routine electrocardiograms on patients with prostatic obstruction. They conclude that "in certain elderly individuals whose hearts are reported as normal to physical examination by the internist the electrocardiogram may show definite evidence of myocardial disease, a fact that should warn the surgeon of the possible danger in attempting an operation, particularly under general anesthesia."

There is a decided practical advantage in differentiating the irregularities of the heart. The prognosis of extrasystoles, as a rule, is much better than that of auricular fibrillation. Extrasystoles from one focus are less dangerous than those from several foci. Auricular fibrillation is a serious heart condition while sinus arrhythmia is a physiologic variation. To give digitalis or quinidin to a patient with partial heart block is dangerous, but it is good treatment in auricular fibrillation. The simple tachycardias have a better outlook than do the paroxysmal tachycardias. Quinidin is not indicated in the simple tachycardias but it may be in the paroxysmal tachycardias. The outlook in a sinus bradycardia is obviously much better than in partial or complete heart block. An electrocardiogram may be of value after thyroidectomy in differentiating hyperthyroidism from myxedema.

Finally, in the treatment of heart cases the electrocardiogram is essential. I have indicated what can be learned from repeated electrocardiograms in cases of coronary thrombosis. The electrocardiogram is a valuable aid in digitalization. The appearance of an inverted T wave, extrasystoles or a partial heart block indicates that a digitalis effect is being obtained. The electrocardiogram also serves as a good guide in preventing overdosage of such drugs as digitalis and quinidin.

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THE PROBLEM OF MENTAL DEFECTIVENESS IN IOWA

ANDREW H. WOODS, M.D., Iowa City

The term "mental deficiency" refers to two distinct but closely related conditions.

Defects of intellect show themselves through the individual's inability to profit by experience or to grasp the essentials of his daily situations. There result inadequacy in his planning and ineffectualness in his efforts, both in his social and economic relationships.

Character defects (psychopathic personality) appear in many individuals early in life and are regarded as constitutional. There is a perversion in the feelings and tastes. Such persons may be apathetic, lazy, or timid; others are vicious; some are perverted in their sexual appetites. They are incapable of being trusted. Often they are subject to fits of violence.

TESTS FOR MENTAL DEFECTIVENESS

The final test of mental efficiency must always be a person's ability to conduct his own life so as not to be a burden or detriment to others, but rather to maintain himself and his dependents, to attain a measure of happiness, and to be of some service to his community. In making this estimate, one must take into account the person's general circumstances and available material resources.

The so-called "intelligence tests" are useful, but their results must be weighed in view of the principle just mentioned. An intelligence quotient above 110 gives promise that the individual ought to succeed in intellectual work, provided he be reasonably diligent and honest. An intelligence quotient below 56 indicates that school curriculum work would be impossible for that individual, and moreover that custodial care will be required. Between those ranges, many persons of low intelligence attain a fair degree of independence and happiness; while others of higher rating, even though they have no gross character defects, cannot maintain themselves, and become burdens to their communities.

THE SERIOUSNESS OF THE PROBLEM IN IOWA

The number of mentally defective persons maintained in the state institutions of Iowa rose from 1,986 in 1922 to 2,221 in 1926, and to approximately 3,000 in 1932. The number of such persons per 100,000 of population between 1922 and 1928 rose from 79.3 to 97.5. The last census returns are not yet available, but will probably be somewhat over 100 for 1932. This indicates that the number of mentally defective persons becoming directly dependent upon the state is increas-

ing at a rate of about 3 per cent per annum. The official census does not contain an enumeration of the number of mentally defective persons throughout the general population, but it is probable that their number is steadily increasing.

The detriment to society resulting from mental defectiveness is due to the following causes:

(a) *They reproduce rapidly.* In several states in which investigations were carried out, it was found that a considerable proportion of the feeble-minded in each of several given districts were the progeny of a known feeble-minded ancestor.

(b) *Their behavior,* being based upon faulty judgment and incomplete knowledge, is a continual menace to the safety and orderliness of the state. Gross blunders and even many criminal acts are due solely to their errors in discrimination, aside from all malice and perverted feelings.

(c) *Persons with constitutional character defects* compose a great mass of fanatics, tramps, professional criminals, and sexual perverts. These persons are often cruel, and usually incapable of normal family and civic loyalty.

(d) *Both the intellectually defective and the psychopaths are an enormous economic load upon others.* The amount spent by the state for hospital and institutional care is a small fraction of the amount paid to maintain the extra service in courts, police organizations, and prisons. A study of the indigent population of our counties would reveal a surprising proportion of mentally defective persons among them.

(e) Even without any of the above disadvantages, *the mentally defective are a dangerous diluent to public opinion.* State policy never rises higher than its tides of popular opinion. The sanity and vigor of thought which transform themselves into our laws are lowered by this large diluting element.

(f) *The mass of intellectually and morally defective citizens has always been an unstable and explosive element in any nation,* ready in times of stress to become revolutionary. They add continually to general insecurity. They are a floating crowd, always ready to be used by plotters and reactionary politicians.

NUMBER OF MENTAL DEFECTIVES IN IOWA

There are in state institutions at present about 3,000 mentally defective persons. The Department of Public Instruction in 1930 reported 5,172 pupils in the public schools of the state who were classified by their teachers as subnormal. In addition to the mentally defective in state institutions and public schools, there is in the general population a large number of mentally defective children ranging from idiots up to morons and

borderline defectives. Some live in the homes of the well-to-do; others in those of the poor. It is possible that their total number at least equals the number already in state institutions.

In addition to these there is a still larger number of "moral defectives" (psychopaths) at large in the population who are considered as problem children, "bad boys" and "bad girls," or even criminals.

If a case study were made of the problem in the state of Iowa, it is probable that the total number of mentally defective persons below twenty-five years of age would reach 15,000.

PRESENT FACILITIES IN IOWA

The state of Iowa at present maintains the following institutions to care for mentally defective children:

At Glenwood, the institution for feeble-minded children, with present enrollment of	1,679
At Woodward, the hospital for epileptics and school for feeble-minded, with a present enrollment of feeble-minded.....	572
On the present waiting list.....	200
At Toledo, the state Juvenile Home, number of mentally defective inmates.....	49

The training school for boys at Eldora and that for girls at Mitchellville have in them a considerable number of intellectually or morally defective inmates. The Women's Reformatory at Rockwell City and the State Reformatory at Anamosa receive adults with various types of mental abnormalities. There are various county, town, and city "homes" for problem children, delinquents, and others who on account of mental deficiency have become dependent upon the communities. In addition to these, the Soldiers' Orphans' Home at Davenport, and the various denominational and undenominational schools frequently include in their rolls mentally deficient boys and girls.

CAUSES OF MENTAL DEFECTIVENESS

Higher civilization protects and preserves weak members who have served or may yet have a contribution to make for the good of mankind. In doing this it is difficult to avoid preserving the useless who are a burden to society as well as to themselves. Public sentiment does not yet permit the elimination of these unfortunates even when their mere existence is obviously of no value to anyone, including the unfortunates themselves.

In the meantime, the mentally defective, particularly those with constitutional character defects, are active in the reproductive functions. Intellect in them has little control over instinctive

tendencies. From the nature of the case, therefore, the mentally defective are active breeders. Being spared by the laws of society, they are free to continue reproducing their kind unless society finds a way to control them.

Many forms of mental defectiveness are not due to inheritable causes. Instances of this are seen in the offspring of many syphilitic mothers. Serious mental defects are produced by injury to the child's head during birth and by infectious diseases before or after birth, which frequently damage the cells of the brain. Persons with even these acquired mental defects, however, become inefficient providers and inadequate parents. Their children are reared in homes which fail to supply even minimum conditions for the development of intellect and character. Such homes often beget criminals and indigent children who soon become a burden upon the state.

The causes of intellectual deficiency, psychopathic personality, criminality, and dependency may be listed as:

- (a) Perverse or inadequate home conditions
- (b) Disease of the mother during pregnancy
- (c) Damage to the child's head at birth
- (d) Infectious fevers during infancy producing encephalitis
- (e) Inheritance of faulty germ plasm from ancestors.

PRACTICAL EUGENICS

It is obvious from this list that methods of preventing propagation are not directly appropriate in the prevention of mental deficiency except in the cases of persons carrying faulty germ plasm. However, in certain cases of persons with good ancestry, but who have become mentally deficient for other reasons, segregation or sterilization ought to be considered because of their inability to rear children, even though those children would not be born with brain defects.

The science of eugenics has thrown valuable light upon the problems involved in breeding physical traits in animals, such as swiftness in horses and good milking capacity in cows. Regarding human traits, eugenics is of assistance in the development of physical characteristics, and it has given valuable information regarding the propagation of certain nervous and mental diseases, including the above mentioned inheritable forms of mental defects and degeneracy. Little is known, however, regarding the inheritance of positive intellectual, esthetic, and moral characteristics.

In the order of relative practical importance the following steps are to be emphasized.

1. *Sexual mating.* The critical opportunity for

insuring the production of good offspring is when young persons select their marital partners. This important decision at present is usually made in a hopeless maze of sickly sentimentality, faulty reasoning, and sexual excitement. One could not successfully select a good cook under such circumstances. The common practice of today is for the young person to take note of the physical appearance, agreeableness of voice, and certain pleasing tricks of manner of the prospective mate. Possibly a little attention is paid to the matter of financial status. But the decisive factor too often is the partner's ability to arouse sexual feeling.

After children have been born and the magnetism of sexual attraction has waned, the partners often find themselves hopelessly uncongenial, and life becomes a burden. The children are then reared in an atmosphere of distrust, bickering, and clandestine sexual affairs with outsiders. The essential conditions for developing inherent moral traits in the children are not present. Out of this milieu arises our growing supply of psychopaths and young criminals..

The education of public opinion regarding the selection of marital mates, the significance of marriage, and the cause of undesirable characteristics in children is, consequently, the most important and the most readily available means of preventing the maldevelopment of the younger generation. Parents, schools, and churches should cease teaching platitudes and inform themselves upon the biologic and psychologic principles derived from actual observation and scientific study. Newspapers and moving picture concerns are of great importance in this field. They can be brought to an interested cooperation in any sane effort to raise the level of intelligence and wholesome feeling regarding marriage and reproduction.

2. *Physicians, and particularly obstetricians,* stand next in importance in the prevention of mental deficiency. The prevention of infectious diseases in the mother during pregnancy, and in the infant during its early years, will eliminate one of the most serious sources of mental deficiency. The so-called "simple diseases of childhood" are being prevented in intelligent communities by the strict enforcement of public health measures. Even mumps and measles are frequent causes of encephalitis in an infant; and they may result in epilepsy, paralysis, and various distortions of the mind.

Unduly prolonged labor and rough manipulation of the infant's head at that time easily damage the child's brain, and thus lead to various disturbances of movement and power, and to mental defects. Obstetric skill during the few hours of

childbirth is a ready means of insuring mental health throughout the succeeding sixty or seventy years of the individual's life.

3. *Custodial care in institutions and colonies.* Idiots, imbeciles, and the lower levels of morons are incapable of guiding themselves. They are best cared for in suitable state or private institutions. This forestalls reproduction.

Among the morons, borderline mental defectives, and psychopaths, there are many who are capable of self-supporting work, but whose behavior is so irregular that they cannot be trusted to live in the community, even under the guidance of their own parents. These persons are best cared for in training schools until they have acquired dexterity in manual work; then in later life they can live under supervision in working colonies. In this way they contribute largely, or even completely, to their own self-support. In such cases there is no particular need for surgical sterilization to prevent propagation.

4. *Sterilization* should be compulsory in the cases of mentally defective persons whose ancestors have shown mental deficiency or other mental disease with sufficient regularity to demonstrate that the defect is transmissible, *provided their general behavior is such that they may be trusted to live at large* in the community. If because of their bad behavior they must be kept under custodial care, sterilization becomes of minor importance. It is unavoidable that the sterilized mental defectives who live at large will in many cases become carriers of venereal disease. For this reason many will later have to be restrained in institutions.

Sterilization may be advised as a voluntary measure in the cases of normal parents who have already borne many children and who, on account of the mother's health and the economic condition, cannot supply favorable home environment for the rearing of still other children.

THE WELFARE OF THE MENTALLY DEFECTIVE

A. The highest interests of all who are mentally defective would be best subserved by forestalling their existence.

B. In the cases of existing persons whose minds are defective, their welfare is best secured through:

(a) Humane custodial care of idiots and imbeciles in public or private institutions.

(b) Higher imbeciles and low morons can be trained in speech, coordinated movements such as walking, dancing, and athletic games, and in the cruder forms of manual work. Some of them are musical, and some have capacity to enjoy pictorial art. Academic education is inappropriate. Under

kindly and firm discipline, with the training indicated above, they show evidence of placidity or even mild enjoyment.

(c) Higher morons and borderline defectives should be trained in speech and in the practical uses of reading and writing. They learn enough of the earlier steps of arithmetic to guide them in counting money and in using implements for measuring, and other accurate procedures. At all levels of mental deficiency, but particularly at the level now in question, the training in good habits is most important. These persons can be taught habits of regularity and accuracy, which become automatic guides to them throughout their future careers. They are particularly amenable to habit formation in childhood, which brings their instinctive tendencies under the control of psychic mechanisms, and they tend later to follow these patterns of behavior thus fixed in childhood. Industriousness, honesty, accuracy, and courteousness are usually easily developed in young mentally defective children. Later, these traits are unattainable.

School subjects are often pressed too far in institutions for these classes. Many of the children have excellent verbal memories which enable them to repeat glibly material which has no meaning whatever for them. Abstract subjects are useless. Learning from books should be limited to what they can understand and use in their ordinary life.

PROCEDURE RECOMMENDED FOR IOWA*

A review of the facts above presented will show that the problem is grave and the danger is growing. The present cost of supporting a few hopeless feeble-minded persons appears great. *But the serious expense to the state arises from the waste of energy in our public schools due to the presence of backward pupils; from the enormous expense of apprehending, trying, and imprisoning these persons when they have offended against the law; and from the economic loss in supporting the indigent, and carrying on the work of the state with its powers weakened by the perverseness or inefficiency of mentally deficient members.*

Massachusetts and New York have found it profitable to expend relatively large sums of money in an effort to reduce the ever-rising tide of mental deficiency in those states. However great the present expense to this state, our outlay is still insufficient. The condition is becoming so serious that trenchant efforts will soon have to be made to overcome it. Delay is only increasing the

*The recommendations that follow were presented to the Iowa White House Conference on Child Health and Protection, April 14, 1932, by the committee on "The Mentally Handicapped." This committee was composed of Mrs. M. N. Voldeng, Mr. R. E. Zerwekh and Andrew H. Woods, M.D.

future embarrassment and expense. The nature of the trouble is such that the final cost of dealing with it is increasing in geometric ratio year after year.

After studying the methods in use in the most progressive states, and after considerable experience in dealing with individuals who are themselves mentally defective, this committee recommended the consideration of the following steps:

A. *Provision for the registration* in each county of the mentally deficient among
School children:

(a) Children who are backward in school to the extent of two or three years

(b) School children who continually present disciplinary problems

The general population:

(c) Those who are sufficiently peculiar (potentially psychopathic) in their behavior to cause annoyance at home and in their neighborhood, or whose behavior interferes with their own advancement

(d) Those throughout the population too backward to be accepted in school

B. *A subsequent study* of each case is to be carried out by a county social worker and psychometrist and will include

(a) Psychometric tests

(b) The record of a physical examination by a registered physician

(c) Investigation regarding the parents and ancestors as to mental and physical health, economic success, and personal peculiarities

(d) The record of the child's earlier life from birth, including home and school conditions, success in study and work, and peculiar experiences.

The suggestion that these two steps be carried out in the county is made because of the importance of having the people of each locality interested in this problem as one which intimately concerns their own welfare. Unless the public opinion of each county and community favors the steps that are to be taken regarding mental defectiveness, little progress can be expected.

C. *A State Commissioner of Mental Defectiveness* responsible for carrying out measures necessary in the solution of the problem. There should be associated with him for advice and cooperation on particular occasions two other citizens, one of whom should be a psychiatrist. These three will constitute the State Commission of Mental Defectiveness. The office of this commission will receive and file the records, above provided for, of all mentally defective persons who are referred to the commissioners for investigation and disposal (treatment, not punishment). The com-

mission will examine such individuals and assign them for

(a) Instruction in special classes or schools to be provided for backward children

(b) Custodial care and training in institutions or colonies

(c) Training in special schools for persons of psychopathic personality who are not intellectually defective but who are a menace to their communities

(d) Sterilization in the cases of those mentally defective persons who are sexually active, whose offspring would be a menace to society, yet who are capable of living at large and supporting themselves.

This commission will investigate the status of the mentally defective throughout the state, and make recommendations from time to time as to improved methods for securing their welfare and happiness, and for protecting the state from harm which might arise from their influence and actions.

D. *Additional facilities.* This program will require:

(a) The addition of special schools and of special classes in existing schools for the care of backward children

(b) Increase of space and personnel in the present state institutions for the mentally defective up to several times the present capacity

(c) Additional training schools and colonies of special kinds suitable for the care of the morally defective who are not intellectually defective.

(d) Special bureaus should be organized in various localities for the registration of well behaved mentally defective workers who will require supervision, but who could be sent to work a day at a time, or for longer periods, in domestic service, farm work, road building, and work of other kinds.

It should be kept in mind that the total intellectually and morally defective population of the state will not need to be placed in institutions. Many of them are harmless and can be guided by state or county officers while living in their own communities. Of the boys and girls trained in state or private institutions, many will have acquired habits and expertness that will enable them to maintain independent life outside of the institutions. Many of these will have been sterilized so as to prevent the risk of propagation. Many of the type who are now becoming drug addicts and hopeless delinquents, if sent in childhood to proper institutions, will be trained in good habits and later will be able to contribute to their own maintenance either in state institutions or while living in communities. A farmer does not temporize with Canadian thistle. He wins out in that

fight by prompt eradication of thistles and active cultivation of grain. By following the same principles, society can save itself in the fight against the steadily advancing hordes of the mentally defective.

CLINICAL NEUROLOGY AND THE GENERAL PRACTITIONER*†

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In choosing a subject to present before the Society, I felt that the interests of all would be best served if a topic was selected that might appeal to the general practitioner and be of some value to him in his daily contact with those who seek his professional services and advice. Although neurology has long been looked upon as the aristocrat of the specialties of internal medicine, and one of the most difficult to master, the diagnosis of many diseases of the nervous system is by no means difficult and should be made by the physician who first comes in contact with the patient presenting the early signs and symptoms of changes in the nervous mechanism. On the whole, it would appear as though the medical student, in his approach to the subject of neurology, often acquires an inferiority complex concerning this branch of medicine, a complex that tends to persist even after he has taken up the pursuit of active practice. It is true that there are many intricate and baffling problems connected with dysfunction and disease of the nervous system that perhaps can be fathomed only by those who have given much time and study to such perplexities. It is not my purpose in this paper to urge upon the general practitioner the necessity of becoming a skilled neurologist in order to recognize all ailments of the nervous mechanism, but rather to plead that he make use of the information he has already acquired, and that he examine his patients carefully and systematically so that he may recognize the more common nervous diseases to which human flesh is heir. This subject is not presented for the enlightenment of those who have given special attention to diseases of the nervous system, but it is presented rather from the viewpoint of the office and bedside clinician.

ABNORMALITY OF GAIT

Let us first consider some of the objective evidence of neurologic changes that one may so readily observe in the first contact with the patient.

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†This paper was also presented by Dr. Throckmorton, as guest of the State Medical Association of Texas, at Beaumont, May 7, 1931, and published in the Texas State Journal of Medicine, xxvii, 558 (December) 1931.

Someone has aptly and truthfully said that "more mistakes are made through lack of observation than ignorance," a statement that has ever been a guiding star to me and one that I would pass on as a slogan well worth heeding. The simple observance of the gait as the afflicted one enters the consultation room may throw much light on what might appear to be a difficult problem for solution. If the clinical signs of hemiplegia are present, one should note the spastic gait in the limb on the affected side, the tendency for the toe to drag, sometimes the clonic movement of the ankle as the toe of the shoe touches or the heel is raised from the floor and the side swing of the extremity as the limb is thrown forward, the so-called scythe-swing, due to the action of the less affected hip muscles. The position in which the affected arm is held is likewise characteristic. If the motor fibers are much involved, the arm is held close to the side of the chest with flexion of the forearm and pronation of the hand; if only a moderate involvement is present, the extremity hangs somewhat limp with little or no swing as the patient walks. A weakness of the musculature of the lower half of the face on the affected side, as indicated by an ironing out or an erasure of the nasolabial fold and a pulling of the mouth toward the opposite side by the unopposed facial muscles, and a deviation of the tongue toward the paralyzed side, completes the clinical picture, with the exception, of course, of dysarthria if the tongue muscle on the affected side is much involved or the motor center for speech in Broca's area or its fibers is implicated. In other words, in the typical hemiplegic state there is a motor paralysis of one side of the body as evidenced by deviation of the tongue to the paralyzed side, a paralysis of the lower half of the face, arm and leg, and usually a diminution or absence of the abdominal reflex on the affected side. All such classic signs as these can be due to but one thing, namely, a lesion involving the motor pathway somewhere between the motor cortex of the brain and the place where the facial fibers and those of the tongue cross the median line in the brain stem. The anterior two-thirds of the posterior limb of the internal capsule is frequently the site for such a lesion, which implicates the fibers going to the tongue, face, arm and leg on the opposite side. A check of the tendon reflexes will usually reveal an increase of the arm, knee and ankle jerks; often patellar and ankle clonus can be elicited, with pathologic or extensor toe signs on the affected side, which clinical findings are present only when a lesion of the upper motor or corticospinal pathway exists.

Suppose, however, the patient shows evidence

of toe-drop with steppage gait or flail-like or flaccid condition of the muscles of the affected lower extremity. One should think at once of a lesion involving the lower motor or spinomuscular pathway which has its origin in the cells in the anterior horns of the spinal cord and whose fibers connect these cells through peripheral nerve trunks with the skeletal muscles. Atrophy of the affected muscles, diminished or lost tendon jerks and changes in the electrical reactions, namely, lost faradic response with increased galvanic reaction but slower muscular contraction to the positive electrode, are but further and unquestionable proofs that the peripheral nerve structures or their spinal cells are involved. In this connection it may be added that in poliomyelitis of spinal origin, the gray matter in the anterior horns of the cord is the site of the lesion. It should not be forgotten, however, that occasionally in a poliomyelitic infection, especially in the cervical region, the involvement of the spinal marrow spreads laterally, implicating the pyramidal tract fibers and thus causing, as it were, the paradoxical finding in this disease of slightly preserved tendon reflexes and an extensor toe sign. If such findings are present, they are usually of short duration, for as the pathologic process subsides, leaving the pyramidal motor fibers to function once again, the classic symptoms of a lesion of the lower motor pathway dominate the clinical picture.

The rather uncertain gait in which the heels predominately strike the floor, the unsteadiness of progression, the tendency for the patient to keep the eyes turned toward the floor, frequently a backward bowing of the legs, perhaps a painless enlargement of a joint, many times of the knee, should at once suggest to the examiner the involvement of the posterior columns of the cord, as is best exemplified in cases of *tabes dorsalis*.

The ataxic-paraplegic patient, of course, presents a gait that is the outcome of a lesion involving, to a greater or lesser extent, both motor and sensory pathways of the cord, a condition often brought about in combined spinal sclerosis due to degenerative changes and observed not infrequently in cases of pernicious anemia or following some inflammatory condition of the spinal marrow.

On the other hand, when the cerebellar apparatus is involved, the patient may present a peculiar reeling, staggering and often lurching gait, with a tendency to veer to one side, depending on the position of the lesion, or he may have a tendency to fall backward, forward or to one side. Such evidences of disturbed locomotion are so readily discernible that their presence should call for a thorough examination by the physician, and, if

possible, confirmatory proof of the underlying causal factor elicited.

Perhaps the patient walks with short, shuffling steps across the floor, gradually walking faster as he proceeds, the upper extremities no longer swinging automatically at the sides but held slightly abducted at the shoulders, semiflexed at the elbows and slightly extended at the wrists with a rhythmic tremor of the fingers. When the patient turns, the trunk moves slowly, *en masse* or *en bloc*, so to speak. Sometimes, if asked to look upward while standing, he tends to run backward with short, hasty steps. The limbs are stiff, yet the tendon reflexes, if examined, are found to be normal, owing to the fact that the extrapyramidal, and not the pyramidal, tract fibers are involved. Such findings as these are characteristic of paralysis agitans, and the presence of the Parkinsonian mask, in which there is little or no emotional play of features, is only confirmatory evidence that there is degenerative involvement of the large pallidal cells of the corpus striatum.

OCULAR PHENOMENA

As the patient seats himself preparatory to interrogation, the examiner will frequently observe clues which, if followed, may speedily lead to a correct diagnosis. For instance, more than once I have observed an inequality of the pupils which was as conspicuous as the oftmentioned "sore thumb." After the possibility of a local ocular defect as a casual factor is excluded, such an observation should make one think of some condition that produces dysfunction of the pupillary fibers of the third nerve or of the cervical sympathetic branch supplying the iris. In the latter, myosis, pseudoptosis of the upper lid and enophthalmos are the oculopupillary symptoms most often found in paralytic lesions, whereas in irritative lesions the converse is noted, namely, dilatation of the pupil on the affected side, forward projection of the eyeball or exophthalmos and a widening of the palpebral fissure.

Not infrequently the inequality of the pupils is found to be the result of an old syphilitic infection which likewise is the cause of the Argyll Robertson pupil, so-called for that famous Scotch physician who first described this phenomenon. If the reflex action of the pupil to light is lost, with preservation of the response of the iris when the patient looks first at a distant object and then at a near object, namely, preservation of the pupillary reaction to accommodation and in convergence, we have unquestioned evidence of an organic change as indicated by the Argyll Robertson pupil. Many times the light reaction is not entirely lost, or the outline of the pupil may be

irregular or ovoid, but when such findings are present they should be looked upon as a possible precursor of the Argyll Robertson phenomenon. To my mind, this type of pupil is one of the few pathognomonic signs in neurology, and in the vast majority of instances, if not in practically every instance in my experience, when so found has proved to be an outward expression of an underlying syphilitic involvement of the central nervous system. Certainly its presence should lead to a most careful and painstaking examination for other evidences of neurosyphilis, such as diminished or lost knee or ankle jerks, delayed sensation, unsteadiness of gait, vesical disturbance, hypersensitive or hyposensitive skin areas, epitrochlear adenitis, unexplained recurrent abdominal pain, so-called rheumatic pains, especially those involving the lower extremities or radiating down the ulnar distribution of the arms, diminished or lost sex power, transient diplopia and a positive Wassermann reaction of the blood or spinal fluid with increased cell count and colloidal gold curve. It must not be forgotten, however, that in some cases of unquestioned neurosyphilis the laboratory findings of both blood and spinal fluid are negative, but such findings should not negate or offset the unimpeachable evidences of syphilitic nervous involvement when they are present.

Perhaps it is not out of place to mention some pupillary findings that are apt to be mistaken for the Argyll Robertson phenomenon. I speak of the changes that one sometimes encounters in the elderly or senile patient. Usually, in these instances, the pupils are small, seldom irregular or unequal, and careful examination will frequently reveal some contractile power of the iris remaining when light is thrown on the pupil. However, other evidences of neurosyphilis are entirely lacking.

Again the observer may note that the patient's eyes have a peculiar jerking movement, especially if turned to one or the other lateral extreme. If when the patient is asked to follow the examiner's finger as it is carried first to one side of the median line and then to the other, a jerking or twitching movement of the eyeballs ensues, perhaps of coarser degree at one extreme, we denote this reaction as horizontal nystagmus, the coarser movement usually resulting when the eyes are turned toward the side of the lesion. If by chance the nystagmus occurs when the eyes are rotated upward or downward, we speak of it as vertical nystagmus, and such a finding is an indication of a pontile lesion.

Nystagmus, intention tremor and scanning speech are the triad symptoms that Charcot, the

famous French neurologist, long ago pointed out as typical of multiple sclerosis. In our present knowledge of this disease, we realize that such symptoms are late rather than early manifestations of this clinical entity. If for any reason the presence of this disease is suspected, the fundi should be examined for optic atrophy or for pallor of the temporal halves of the disks, the visual fields charted for scotomas, the abdominal reflexes tested to see if they are diminished or absent, the lower extremities carefully examined for possible motor changes indicative of paraplegia and for objective or subjective sensory changes, and the patient interrogated concerning possible bladder dysfunction as well as a history of remission of symptoms. Biologic tests of the spinal fluid are negative in this disease, except for the occasional presence of globulin and a slight increase in the number of cells in a few instances, and the colloidal gold curve has been reported as paretic by some writers. It may be of interest to note that in a preliminary report on the etiology of multiple sclerosis given before the Chicago Neurological Society in September, 1930, Sir James Purves Stewart, of London, announced the isolation of an organism from the spinal fluid of patients suffering from this disease. The name "spherule insularis" was given to this organism by the noted English neurologist, who believes that the disease is caused by this specific body producing diffuse inflammatory patches throughout the nervous system, which later degenerate and produce permanent changes. So far, American investigators have been unable to confirm the findings of our distinguished over-seas confrère.

Sometimes the examiner will observe a drooping of the upper lid and an outward and downward rotation of the eyeball. Such findings are always indicative of a paralysis of the oculomotor nerve which supplies fibers to the voluntary portion of the levator palpebrae superioris, to the iris and to the extrinsic muscles of the eye, with the exception, of course, of the superior oblique and the externus rectus muscles.

A turning inward of the globe toward the nasal side and an inability to rotate the globe outward beyond the median line means a paralysis of the external rectus muscle which is supplied by the abducens or sixth cranial nerve. An isolated lesion of this muscle is of no great diagnostic moment, as the nerve trunk, after leaving the pons, traverses a considerable distance along the base of the skull before reaching its exit; hence anything capable of disturbing it in any portion of its course may produce symptoms of weakness or paralysis of the external rectus muscle. In passing, it may be well to mention that the most common com-

plaint elicited as a result of a third, fourth or sixth nerve palsy is diplopia, or double vision.

Occasionally one may observe that a patient avoids looking to one side; he keeps the eyes turned and sometimes the head twisted in a certain manner. Questioning may reveal that little or nothing can be seen to the right or to the left, as the case may be, due to obliteration of half of the visual fields. To determine roughly the involvement of the fields, the physician places himself exactly opposite and about three feet in front of the patient. One eye of the patient is then covered, and he is directed to gaze steadily and straight ahead into the physician's eye. Meanwhile the examiner closes his eye which is opposite the covered eye of the patient; by carefully bringing his hand into a plane midway between himself and the patient, he can, by moving his fingers, ascertain any considerable defect or narrowing of the visual fields. In this manner the temporal and nasal fields and the upper and lower quadrants of each eye can be tested. Any departure from the normal can readily be checked by having a competent oculist measure the amount of narrowing by means of a perimeter.

Pituitary tumors encroaching on the optic chiasm are a frequent cause of the bitemporal type of hemianopia, owing to pressure on the crossed fibers which supply the nasal sides of the retinae. In the homonymous type, the lesion lies somewhere back of the chiasm, either in the optic tract, the primary optical centers, the optic radiation or in the cortical visual center in the occipital lobe of the brain. Should either of these phenomena be suspected or found, a more careful check-up should be made by a competent oculist. The Wernicke pupillary sign may be of help in distinguishing between a lesion anterior to the primary optical centers in the brain and one posterior to the centers in the radiation tract or in the occipital cortex. If a point of light is thrown on the blind half of the retina and the pupil contracts, the lesion lies posterior to the primary centers. This sign was pointed out by Wernicke many years ago and bears his name. While to the general practitioner this diagnostic method may be of no practical value, in the hands of a skilled ophthalmologist it may be the means of eliciting a finer localization of a lesion involving the visual apparatus.

TRIFACIAL NEURALGIA

Many times the simple observance of a patient's actions will suffice in making the diagnosis of tic douloureux. The painful expression of the facies is often striking, and these unfortunates avoid all voluntary movements of the facial muscles,

such as chewing, talking, protruding the tongue or snapping the teeth together, through fear of precipitating an attack of neuralgic pain. The shielding of the face from a draft or gust of wind is many times resorted to, and any attempt of the examiner to exert pressure over the "trigger zones" of the face is thwarted with the adroitness of a fencing master. The peculiar sticking, stabbing, jabbing, lightning-like, intermittent pains cause a response by the patient which, if once witnessed, can never be forgotten; this reaction stands out in marked contrast to the whining plea of the pseudoneuralgic who is emphatic in his statements as to the terrible sufferings to which he is subjected, but who fails to present the clinical picture of true trifacial neuralgia. It should be remembered that this disease is practically always unilateral, and, fortunately, owing to the anatomic distribution of the branches of the trifacial nerve, nothing on the unaffected side of the face can influence the excitation of the attacks of pain. I have never seen both sides of the face simultaneously involved.

FACIAL PARALYSIS

Of all the peripheral nerves, the seventh, or facial, is by far the most frequently paralyzed. The deformity of the face produced by Bell's palsy is most striking. The furrows across the forehead on the affected side are wiped out, the lower lid sags, allowing the tears to collect and then run down the cheek, the nose is pulled toward the sound side, and the mouth is likewise drawn to the opposite side, while the weakened face allows the angle of the mouth to droop, letting the saliva slowly dribble from it. Voluntary attempts to expose the teeth result in a movement of the nonpalsied side only; the ability to whistle or pucker the lips is entirely gone, and articulation of labial consonants is impaired. When only the lower quadrant of the face is involved, as in hemiplegia, the lesion lies somewhere along the facial fibers between their cortical origin and the nucleus of the seventh nerve in the pons varolii. The non-involvement of the upper facial muscles is explained on the basis of a double innervation of the nucleus of the peripheral trunk, so that a one-sided central lesion is capable of producing paralysis of only the lower part of the face.

With the involvement of the nucleus or of the peripheral fibers, the entire half of the face on the side of the lesion shows the effects of the paralysis. If the lesion is intrapontile, facial paralysis results, but there is no accompanying disturbance of either taste or hearing. Not infrequently, however, the sixth nerve or its nucleus is involved, owing to its close anatomic proximity to

the motor root of the seventh nerve. If the lesion is between the point of emergence of the facial nerve from the pons and the geniculate ganglion, the symptoms of facial paralysis will be present; in addition, some disturbance of hearing is usually manifest as the auditory nerve lies close to the facial trunk. If the facial nerve is involved below the geniculate ganglion and within the Fallopian aqueduct, the chorda tympani branch of the trigeminus is usually implicated, with a resulting loss of taste in the anterior two-thirds of the tongue on the affected side. If the nerve to the stapedius is likewise involved and the auditory apparatus otherwise intact, the patient will frequently complain of hypersensitiveness to noises. While it is true that the lesion most frequently accountable for facial paralysis perhaps occurs at some point after the exit of the nerve from the stylomastoid foramen, a knowledge of the additional findings as already enumerated will enable one to locate a lesion occurring between the pontile nucleus of the nerve and its exit from the skull.

If the palsy is due to neuritis, and not to any organic disease of the nucleus, the application of the galvanic current by means of an interrupter over the palsied muscles has afforded me the best therapeutic agency for the restoration of their function.

BULBAR PALSY

The glosso-labio-laryngeal syndrome, or bulbar palsy, presents a clinical picture which, if once observed, is not likely to be forgotten. There is, of course, paralysis of the tongue, lips and vocal cords, with a resulting involvement of the articulatory apparatus and increasing difficulty in swallowing. Since the bulbar nuclei are involved, there is degeneration of the muscle fibers of the face and lips with resultant fibrillary tremors and progressive weakness of the muscles of articulation which, sooner or later, leaves the patient speechless and the tongue immobile and atrophic. As time intervenes the saliva can no longer be retained in the mouth, while the act of swallowing or coughing may be almost impossible. It should not be forgotten that the early signs of a bulbar palsy may be but the forerunners of that fatal degenerative cord disease spoken of as amyotrophic lateral sclerosis, or, as is not infrequently the case, the bulbar symptoms may be late manifestations of this disease and merely the expression of the upward extension of the degenerative cord changes that accompany it.

TREMOR

Perhaps the patient may show evidence of a tremor in one or more of the extremities. Those who are in general practice will undoubtedly meet

two types most frequently. I refer to the tremor of paralysis agitans and that due to toxic goiter. In the former, the tremor generally begins unilaterally, manifesting itself not infrequently in an upper extremity. As time intervenes, the opposite side usually becomes involved, and associated with the tremor is an increasing muscular rigidity. Years ago, the late Dr. Harold Moyer, of Chicago, pointed out the cog-wheel type of rigidity which one can often elicit in these cases. Everyone should be familiar with the fact that passive flexion and extension of an extremity in this disease will readily show that some muscular rigidity occurs sooner or later. If, for instance, the examiner places one hand over the patient's biceps and grasps the muscle, and then passively flexes and extends the forearm, he will perceive not infrequently a rigidity that does not quickly yield, but one that gives way in a series of relaxations and contractions, imparting to him a sense of cog-wheel jerks. The characteristic "pill-rolling" movement of the thumb and fingers, the flexion-extension movements of the wrist or ankle and the pronation-supination movements of the forearm are all so well known that even to mention them in connection with Parkinson's disease may be deemed superfluous. There are cases, however, in which the tremor is slight or absent, the muscular rigidity alone constituting the dominating clinical entity. In passing, it may not be out of place to mention the beneficial effects of stramonium in cases of muscular rigidity due to changes in the corpus striatum. I have noticed especially a marked lessening of the rigidity in the postencephalic, Parkinson's syndrome, even in cases in which the rigidity is due to paralysis agitans. Unfortunately, in the latter cases I have seen but little effect on the tremor.

In the tremor due to thyrotoxicosis, however, there is a fine rhythmic movement which is more apparent on voluntary exertion and which is perhaps best demonstrated in the upper extremities. If the examiner directs the patient to extend the arms with the elbows slightly flexed and the fingers extended and spread, a visible tremor is often observed; but if the tremor is slight, it can best be detected when the examiner lightly touches his palm to the tips of the patient's fingers or places the tips of his fingers lightly on the dorsum of the patient's hand. A history of increasing nervousness, increased appetite with loss of weight, gastro-intestinal upsets, especially unexplained diarrheal episodes, coupled with the clinical findings of exophthalmos, tachycardia, tremor, perhaps goiter, with or without pressure symptoms, should be sufficient to enable the examiner to make the diagnosis of exophthalmic goiter; an increase in

the metabolic rate of the patient would add the last link in the diagnostic chain. It is not the late manifestations of toxic goiter, however, to which I would especially direct attention, for even the crudest novice would at once recognize their cause; rather I would have the physician who encounters the patient with few or slight symptoms of beginning thyroid activity, such as tremor, slight palpitation and unexplained nervousness, be on his guard to the possibility that these are precursors of a beginning thyrotoxicosis, in which event he should be prepared to make repeated observations of the patient, if necessary, and to take frequent readings of the metabolic rate. I do not hesitate to state, and I do so without fear of contradiction, that no case of hyperthyroidism ever showed a normal or a subnormal metabolic reading if the reading was correctly made.

Occasionally one will observe a patient who shows a distinct tremor of one arm and leg, due to the involvement of the red nucleus in the crus cerebri or of the rubrospinal tract. The latter has its origin in the red nucleus, and the fibers cross to the opposite side and descend in the contralateral aspect of the pons and medulla to the spinal cord, where they occupy an anterolateral position. When the nucleus or its fibers is involved, a slow rhythmic tremor of the limbs of the opposite side, especially in the hand and foot, results. There should be no difficulty in diagnosis if in addition to the tremor or hemiataxia, an involvement of the third nerve exists on the side of the brain lesion. This is due to the fact that the peripheral fibers of the motor oculi nerve pass through the red nucleus, and the symptoms resulting from a lesion involving it are those of third nerve paralysis on the affected side with tremor and hemiataxia of the contralateral arm and leg. Such findings are spoken of as "Benedikt's syndrome."

ORGANIC AND FUNCTIONAL PARALYSIS

Thus far I have touched upon some of the more obvious objective evidences of neurologic changes that may be more or less readily perceived by the examiner. Let us now turn our attention for a moment to a consideration of motor paralysis, organic and functional. A knowledge of the motor pathways of the brain and cord is imperative to an understanding of the resulting symptoms when lesions of either are present, and I trust I may be pardoned if I seem to be too elementary in briefly calling attention to these tracts.

The upper motor pathway has its origin in the motor area of the brain which lies in the convolution just anterior to the fissure of Rolando. From these cells fibers pass inward and downward

through the white substance of the hemisphere, gradually forming a compact bundle which occupies the anterior two-thirds of the posterior limb of the internal capsule. Pursuing a downward course, the fibers pass through the anterior aspect of the crus cerebri, the pons varolii and the medulla, where ninety per cent cross the median line and descend in the cord as the crossed pyramidal tracts; the remaining ten per cent pass downward in the anterior aspect of the cord, crossing over in the anterior commissure, to end with those already crossed about the cells in the anterior horn of the spinal marrow. Thus is formed the connecting motor pathway between the brain and cord, which is spoken of as the upper motor pathway, the upper motor neuron and the corticospinal pathway. Of course, the fibers going to the nuclei of the motor cranial nerves in the brain stem likewise cross the median line, with the exception of the fourth nerve, the peripheral trunk of which alone crosses to the opposite side. Lesions of the upper motor pathway produce symptoms which are characteristic, and which may be enumerated as follows:

1. Paralysis of diffuse muscle groups
2. Hypertonicity or spasticity of paralyzed muscles
3. Preserved or increased tendon reflexes
4. Clonus of muscles, oftentimes
5. Associated movements (synergies)
6. Normal electrical reactions
7. No atrophy except from disuse
8. Extensor or pathologic toe signs

The lower motor pathway has its origin in the cells in the anterior horns of the cord from which fibers pass outward and backward and unite with sensory fibers, coming to the posterior horns of the cord to form the spinal root. The fibers continue an external course and help to form the various peripheral nerve trunks which eventually terminate in the skeletal muscles and periphery of the body. The pathway that connects the spinal cord with the musculature of the body is called the lower motor pathway, the lower motor neuron and the spinomuscular pathway. Lesions of this system are quite characteristic, and are as follows:

1. Paralysis, oftentimes of individual muscles
2. Hypotonicity or flaccidity of paralyzed muscles
3. Diminished or absent tendon reflexes
4. No clonus
5. No associated movements
6. Electrical reactions of degeneration
7. Atrophy due to trophic disturbance
8. Plantar flexion of toes, if movement is preserved

A knowledge of these two pathways, and of the symptom groups resulting from disease or injury to them, will be of immense help in differentiating between lesions affecting them. Of course, when both pathways are simultaneously involved, there will of necessity be symptoms characteristic of each, as is so well brought out in the combined motor tract disease known as amyotrophic lateral sclerosis. Explained on the merger basis, which so greatly occupies the American mind today, in this disease we have a patient suffering from both hemiplegia and anterior poliomyelitis.

Concerning the motor phenomena characteristic of functional paralysis much could be said, but I shall only briefly call attention to important clinical findings that are often so prominent in cases of hysterical paralysis:

1. Paralysis may be flaccid or pseudo-spastic
2. Segments of limbs are equally affected
3. Reflexes are never lost, but may be diminished or concealed if contracture is present
4. A false or spurious clonus may be present
5. Associated movements are absent
6. Atrophy, if present, occurs only from disuse
7. Normal electrical reactions are present
8. Extensor or pathologic toe signs are never present unless simulated

It should not be forgotten that the whole appearance of a functional paralysis can be imitated voluntarily, whereas in an organic paralysis initiation is as naught, especially when lesions of the spinomuscular pathway are simulated.

PATHOLOGIC TOE SIGNS

A consideration of the motor pathways with their clinical signs and of those findings present in the functional paralytic state brings out clearly the necessity for a wholesome understanding of extensor or pathologic toe signs. Everyone is familiar with what happens when the plantar surface of a normal individual is stroked, namely, the toes involuntarily turn down in the flexed position. This is known as plantar flexion and is normally present except in infants and young children whose motor fibers have not completely myelinated. When, however, the leg fibers or cells of the upper motor pathway become involved, plantar flexion no longer results, but instead stimulation of the sole of the foot produces extension of the great toe or of all the toes. This phenomenon is spoken of as the Babinski sign, and it is one of the few pathognomonic findings in clinical neurology. Fortunately, we are not compelled to rely on this sign alone, for there are others which are equally significant, such as the Oppenheim, Gordon, Chaddock and Craft's toe signs, and

which are often present when the corticospinal pathway is irritated or diseased.

Some twenty years ago I called attention to a new method for eliciting the extensor toe reflex. At that time I found that percussing the skin at the base of the great toe inwardly to the long extensor tendon would many times produce extension of the toe when the leg fibers of the upper motor pathway were involved. Later, I discarded the percussion method and was able to obtain the same phenomenon when the skin over the base of the toe or along its inner aspect was stimulated by gentle strokes with a blunt instrument.

Any one or all of these pathologic toe signs may be present in a given case, and when found are indicative of some change in the upper motor system. They are never found in paralysis of the lower motor system and are likewise absent in functional nervous disease, unless attempts to simulate them are made by a malingerer. In such a case, it is only reasonable to assume that a knowledge of the various methods of eliciting pathologic toe signs would not be known to such an individual, and the examiner would have at his disposal other means by which he could prove the simulation.

CONCLUSION

In conclusion, I would again call attention to the fact that lack of observation, rather than ignorance, is productive of many mistakes that could otherwise be avoided. Dr. James C. Wilson, who held the Chair of Medicine at the time I attended the Jefferson Medical College, once said that "observation is the whole art of medicine." Certainly I think we will all agree that, as practicing physicians, most of our knowledge of the human body and of its manifold diseases was acquired through the sense of sight. The diagnostician is he who has developed to the fullest extent his power of observation. If he does not know what it is that he sees, he is not satisfied until he has made every effort to find out. Medicine is not an exact science. No two persons are exactly alike, nor does disease always affect individuals in the same manner. We often find changeableness of symptoms a stumbling-block to ready diagnosis, especially in nervous diseases. Fortified is the physician who always keeps in mind the fact that the beginnings of many diseases are seemingly not associated with any demonstrable changes, or are associated with changes that may seem trivial. Thus he avoids laying himself wide open for a vulnerable thrust if, later, definite organic changes replace those at first considered irrelevant, functional in nature or of no consequence. The physician who conscientiously and consistently exam-

ines his patients by routine and painstaking methods will ultimately be rewarded by the self-satisfaction resulting from a task well done. In so doing he will bring to light facts that, in conjunction with a carefully constructed history and appropriate laboratory tests, make for the perfect diagnosis.

INDICATIONS FOR SYMPATHECTOMY IN ANGINA PECTORIS*

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In spite of the progress of medicine, there still remains a number of unsolved problems and cardiac pain holds a prominent place among the obstacles in the path of science.

It is agreed generally that any surgical procedure in this condition is only palliative but relief of pain is important both in reference to the comfort of the patient and also, as Wenckebach and Danielopolu have suggested, this pain in itself may actually be injurious to the heart.

Because of the variety of surgical measures that have been advocated in angina pectoris, a review of these different procedures is presented with a few general indications for the proper selection of cases.

ANATOMY AND PHYSIOLOGY

Surgical therapy in angina pectoris is directed toward the division of pain fibers which reach the spinal nervous system and give rise to reflexes stimulating the somatic sensory neurons supplying the neck, arms and thorax. While the knowledge of the nervous system of the heart is incomplete, it is agreed that this system is a primitive mechanism because the heart does not develop segmentally but originates in the distal portion of the head and descends. Thus its nerve supply is derived from the autonomic nervous system. It has been shown definitely that the heart is innervated through the cardiac branches of the vagi and the sympathetic cardiac nerves. It is believed, however, that the afferent branches of the vagus do not carry impulses of pain, but chiefly depressor and vasomotor fibers.

The conception of the sympathetic fibers bearing pain impulses, which reach the central nervous system through the inferior cervical and upper thoracic sympathetic ganglia, is based upon the work of Cannon, Singer, Spiegel and Wassermann, Ranson, Kuntz and Edgeworth.

It is chiefly through Cannon's masterful interpretation of this ancient mechanism of reflexes that a clear view can be obtained. In general, the autonomic nervous system communicates with the

central nervous system so that when the choice of fight or flight is made, the skeletal muscles are sufficiently supplied with sugar, oxygen and adrenal energy.

Clinical evidence of the widespread communication of reflexes is seen in an attack of angina pectoris with the accompanying symptoms of lacrimation, salivation, dilatation of the pupils, sweating, clammy skin, nausea, vomiting and a desire to defecate. Not infrequently there is a desire to void and many observers have reported the occurrence of testicular pain in these cases. To fully describe the prevalent opinions on these many phenomena so complexly involved in cardiac pain is beyond the scope of this paper but a few outstanding experiments may lead to a more lucid explanation.

Spiegel and Wassermann have shown that stretching of the aorta produces pain and that the pain fibers from this region follow the same pathway as pain from the heart. Singer has demonstrated that an acute ischemia of the myocardium is without any painful reaction in animals and that pulling the adventitia of the coronary arteries or aorta is extremely painful. He has shown further that removal of both stellate ganglia makes insensitive the heart and aorta.

When the occurrence of angina pectoris is considered as an accompaniment of senescence with changes in the vessels it seems that Danielopolu's explanation is most adequate for the present knowledge of this mechanism. Danielopolu states that anginal attacks are the result of an imbalance between the work of the myocardium and its blood supply. Thus an interruption of the reflex arc will give relief from pain and this is the reason that the many operative procedures have met with varying degrees of success.

OPERATIVE PROCEDURES

The surgical treatment of angina pectoris was first proposed by Franck in 1899 but was not practiced until 1916 when Jonesco removed the entire cervical sympathetic chain and first thoracic ganglion. This formidable operation was not readily accepted, however. In 1923, Coffey and Brown reported five cases in which the left superior cervical sympathetic ganglion was removed or the division of the superior cardiac nerve and sympathetic trunk below the superior cervical ganglion was sufficient to afford relief from pain. Their report stimulated widespread interest and many types of operation were devised from 1923 to 1928. However, the wave of enthusiasm played out and in recent years more care has been exerted in the selection of cases for surgery. As the knowledge of the nerve supply to the heart was

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increased, it was shown that all of these surgical measures were aimed at an interruption of the reflex arc. In all, approximately five hundred cases have been reported but less than two hundred are suitable for critical study.

In 1924 Brunn and Mandl attempted paravertebral nerve block in the upper thorax with procain and achieved excellent results. Later Swetlow added alcohol in these injections and since his original work, many have used this method with more constant results. This plan of therapy seems most logical as it interrupts the visceral afferent pain fibers which pass through the rami communicantes and dorsal roots regardless of their route prior to that point.

White has demonstrated the simplicity of alcoholic injection and minimal risk in skilled hands in spite of the proximity of the pleura and spinal cord. His technic consists of injecting the upper five thoracic sympathetic ganglia with 5 c.c. of one per cent procain and following with 5 c.c. of 85 per cent alcohol. In my experience, this procedure seems more satisfactory than the cumbersome and dangerous operation upon a patient whose cardiac mechanism is damaged to some extent at least. The objections voiced toward this plan of therapy are that it interferes with the cardiac accelerator fibers, that all the pain fibers are not interrupted and that it is followed by disagreeable paresthesia. However, the work of Cannon and his co-workers has proved that the cardiac accelerator mechanism is more widespread and the studies of Ransom, Edgeworth and Kuntz have confirmed the original contentions of Langley and Gaskell that the sympathetic system has no sensory fibers above the middle cervical ganglion.

The paresthesia following alcoholic injection consists of tenderness of the skin or a dull ache in the distribution of the nerves that have been injected. These uncomfortable symptoms last only a short time and are insignificant in comparison with the previous cardiac pain.

A review of 120 cases with operation shows a relief in 68 per cent with a mortality of 7 per cent and alcoholic injection of 75 cases shows relief in 85 per cent with no mortality. It is sometimes necessary to repeat the alcoholic injection in nine or twelve months but a second injection seems preferable to such drastic surgery.

SELECTION OF CASES

It is obvious that any case of severe anginal pain presupposes a damaged cardiac mechanism and drastic surgical procedures must be approached with caution. The patient deserves an opportunity for relief from pain regardless of whether the precordial distress is due to a throm-

bosis of the coronary artery, a spasm of the vessel, ischemia of the myocardium or distention of a diseased aorta.

Certain types of angina pectoris are so fulminant that any surgical measure is contra-indicated but there are other types of angina pectoris which lean more toward the chronic phase and it is to these conditions that surgical intervention should be directed. In most types of coronary thrombosis the patient is in such poor condition that no thought of operative therapy is justifiable but in the fourth phase or type of coronary disease as described by Osler, Herrick and Bierring, interruption of the pain pathways seems a most humane gesture. This fourth type of coronary thrombosis is characterized by recurring anginal pain at frequent intervals and although the accompanying systemic symptoms are not severe, they are sufficient to keep the patient in a condition which borders upon a state of chronic invalidism. Surgical intervention also seems rational in the cases of luetic or hypertensive aortitis with a fairly well compensated myocardium. Sympathectomy is most definitely indicated in the cases of vasospasm or Raynaud's disease of the heart.

It is of the utmost importance to choose carefully the case for surgery. This should be done only after the more simple plans of treatment have proved unsatisfactory following deliberate study of the physical findings, aided by electrocardiography. The chief objection that has been raised to ablation of the pain pathways is that the warning signal is removed and the patient is prone to overexertion or excitement. This is not the case because in spite of pain relief, the patient still has a warning signal in the form of a heavy, smothering sensation on overtaking of this delicate mechanism.

SUMMARY

1. The knowledge of the anatomy and physiology of the nerve supply to the heart is still inadequate but interruption of pain pathways in carefully selected cases of angina pectoris is justifiable when other means of therapy have failed.

2. The cases of angina pectoris can be grouped in two classes in reference to surgical therapy. The first class consists of the most severe type in which the cardiac mechanism is so badly damaged that an operative measure is definitely contra-indicated. The second class consists of patients suffering from recurrent cardiac pain in whom the physical and electrocardiographic findings indicate a fairly well balanced mechanism and it is to these unfortunate sufferers that the division of pain fibers is offered when simpler plans of treatment have not proved satisfactory.

3. The removal of the sympathetic ganglia is

a formidable operation and does not give the constant results that the less dangerous procedure of alcoholic injection affords. The warning signal is not removed in patients who have been relieved of pain but is merely transformed to a disagreeable sensation on overexertion.

THE PSYCHOSES ASSOCIATED WITH PREGNANCY*

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From time immemorial, insane individuals have stimulated a morbid curiosity in their more fortunate brothers. All of the writers of antiquity wrote up insanity as "front page stuff" and even Shakespeare knew his psychiatry. When the condition is associated with pregnancy or the puerperium, it is only natural that it receive all the more attention. Throughout the centuries there has developed a voluminous literature on the subject, not a little of which is devoted to the puerperal insanities, and most of it now antiquated.

In spite of the fact that Marce, in 1856, after an exhaustive study, came to the conclusion that the insanities related to the puerperium might occur in any form and were not specific, it was not until 1926 that anything positive or convincing was written. During that year, Ellery in Australia and Strecker in this country, brought out their series of cases which conclusively demonstrated the facts.

That the idea has not yet permeated the profession as a whole, is shown by the fact that puerperal insanity, psychoses of pregnancy, puerperal mania and insanity of lactation are terms still used to designate a clinical entity which does not exist.

It is necessary then, that we understand first, that there is no psychosis peculiar to childbirth or the puerperium, but that it may be manifested in any of the usual forms occurring at any other time or in either sex; and second, that the added stress and strain of pregnancy and childbirth is the stimulus or added burden which precipitates the attack in those individuals in whom there is a predisposition.

Let it be understood that when I use the terms mentioned above, they are not to express a definite psychosis but a diseased mental condition occurring during pregnancy or the puerperium, without reference to the type of its expression.

Insanity in general is predisposed to by several factors, among which are: inherited predisposition, instability in the individual and perhaps some maladjustments during the early years of life. The precipitating causes are any stress which low-

ers the threshold of stability, such as infection, exhaustion, inability to adjust socially, assumption of unaccustomed responsibilities and possibly endocrine dyscrasias.

Any of these causes may be at work during pregnancy and the puerperium. Infection may be chronic throughout pregnancy, gradually debilitating the patient, or it may be acute, due to contamination during labor. Breast abscesses or acute respiratory infections, as well as pelvic complications, are responsible for a goodly number of the toxic psychoses. Too frequent childbearing, prolonged labor and postpartum hemorrhage are the exhaustive and debilitating factors most commonly found. Maladjustment is evidenced first by frigidity, which develops into a repugnance for the sexual act and finally an active antipathy toward the husband. This condition is more frequent in, and according to Zilboorg, almost pathognomonic of, the malignant psychoses.

The psychoses of pregnancy fall into the three main classes of insanity: acute confusional, manic depressive and schizophrenic or dementia praecox.

In acute confusional insanity there are sensory hallucinations, increased psycho-motor activity, clouding of the consciousness and incoherence of speech. The toxic-exhaustive dementias are included in this group and can, perhaps, more than any other of the psychoses, be laid at the door of childbirth, since all have demonstrable toxic or exhaustive precedence; an hereditary taint can be found in only about twenty-five per cent and there is a much greater individual mental stability among these folks than any of the other classes. While toxic and exhaustive factors are the apparent causative agents, to a small degree, in the other psychoses, in the acute confusional insanities they are responsible for about fifty per cent of the mental breakdowns. More than seventy-five per cent of the remainder have psychotic antecedence and none shows definite toxic or exhaustive elements.

The hereditary factor runs high in the manic-depressive psychoses: very close to sixty per cent of the patients have an inherited predisposition on one or both sides of the family. In the remaining forty per cent, there is individual instability almost without exception.

Here we have a group of unstable individuals with poor heredity, who break with the first pregnancy or after rapidly repeated pregnancies, and then continue to do so after each succeeding delivery. Abortions and premature labors have the same effect as full-term birth. The depressed phase is more often seen than the manic or cyclic. This may be due to an exaggeration of the normal fear and anxiety during pregnancy and labor con-

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cerning the outcome, producing a morbid mental state instead of elation.

The praecox group comprises about twenty-five per cent of the total according to most authorities; however, Zilboorg maintains that fifty per cent of the puerperal insanities are in this class. Heredity is paramount here, averaging better than fifty per cent with insanity in the forebears. The remainder, with few exceptions, present peculiarities of mental make-up, predominantly those of the schizoid personality. These individuals usually marry late or adjust themselves poorly to marriage and are frigid.

Bleuler has described a so-called schizoid personality which is reserved, secretive and unsocial; he makes friends poorly, day-dreams and seems to be more occupied with an inner world of his own than with the realities of every-day life. It is this sort of person who most frequently develops dementia praecox. It is in this group, also, that the experiences of early childhood most often evidence themselves in the development of the psychosis.

The question naturally arises: how frequent are psychoses in relation to pregnancy and the puerperium? Zilboorg collected statistics for 10,394 women admitted to institutions, in 904 or 8.7 per cent of whom the diagnosis was referable to pregnancy and the puerperium.

What then is the situation? Here we have a certain number of women who are not able to stand the stress of a physiologic process. Why do they collapse and why do not all women show signs of mental aberration? This is the problem: to find the signposts and landmarks of impending disaster to guide us in the evaluation of each woman when she presents herself for care during pregnancy.

There are several such signs and symptoms which should make us suspicious and goad us into making further inquiry into her mental state. First is a history of a nervous breakdown. This is a definite earmark of nervous instability and probably mental instability as well. We should inquire into the cause of it and the reactions of the patient before and after the attack. Some of these so-called nervous breakdowns are really mental breakdowns with an admixture of the visceral symptoms: the diagnosis being made on the most obvious signs, ignoring or oblivious of the psychic phase. Such a history should prompt inquiry into the mental status of the family, a cautious probing for that phantom spectre which is so carefully concealed.

The mental stability of the individual is the next point of interest. A history of previous dementia, whether in relation to childbearing or

not, is significant. If it followed a pregnancy we can surely expect a repetition; if it followed an operation or depleting illness, the likelihood of a recurrence is almost as great. This is especially true of the manic-depressive psychosis in which spontaneous recovery is the rule. An individual with a shut-in, introverted or schizoid personality should always be looked upon with suspicion as such an individual is not normal to begin with and the stress of pregnancy may be the unbalancing factor.

The third sign is endocrine dyscrasia. What a welter of ignorance has been covered up by those two words. What a mass of empiricism and quasi-scientific twaddle has been foisted off upon us in their name. Conflicting claims, dogmatic conclusions and biased opinions have all conspired to befuddle us and make us doubt such truth as there may be in any of it. Truth there is, however, and it must be sought and nurtured. Who knows but that the time may not be far distant when we shall be able to develop any desired type of individual by changing—augmenting or diminishing—the function of certain glands?

By what facts or reasoning can we say that there are discoverable signs dependent upon endocrine dyscrasias which would indicate a lowered mental stability or which might lead to such a condition? Simply these:

That observers have noted amenorrhea as a frequent concomitant in many of the psychoses;

That the male habitus—narrow pelvis, flat chest, bearded face and male escutcheon—is found often enough to warrant its scrutiny;

That Wilson and Christie have shown ovarian extract to be of definite value in a small series of insanities of some duration;

That insanity is most frequent at menopause.

All of these point to the fact that lowering of the ovarian function is in some way connected with the condition, if not its precursor or initiator. Whether the ovaries alone are at fault or whether the associated glands play a part, only time and trial can tell. Nevertheless, there is evidence enough to warrant taking signs of hypo-ovarianism into consideration when evaluating the mental possibilities of the prospective mother.

It will be interesting to see what a series of mental cases will show when the newer tests are used to determine the status of function of the various endocrine glands.

Lastly, to quote Ellery: "Any of the following symptoms should excite his (the obstetrician's) suspicion: (1) insomnia; (2) prolonged anxiety; (3) exhaustion, mental or physical; (4) change of character, either morbidly elated or morbidly depressed."

In glancing back over the preceding remarks, we find that for the most part those individuals who develop psychoses have an hereditary predisposition or a mental instability within themselves. Also, the psychoses may be developed by the action of toxic or exhaustive factors upon a normal or slightly aberrant mentality; or, by the action of normal pregnancy and labor upon neuropathic individuals.

In our zeal for seeking symptoms, let us not be led into a labyrinthian maze, wherein we see potential dementia in those temporary disturbances of normal pregnancy such as mild depressions, irritability, restlessness and erratic impulses. These symptoms in a woman with bad heredity should be looked upon with suspicion and their course should be carefully watched. An increase of the symptoms or the development of additional ones should prompt one to call a psychiatrist into consultation.

If signs of imminent disaster appear, the patient must be put into an institution or at least under competent supervision. The presence of pregnancy is no contraindication to such measures, but the conception must be allowed to go to term, if possible, since abortion or premature labor will precipitate an attack. A great deal may be accomplished in the way of treatment between the time the symptoms are first noticed and before labor supervenes. The earlier it is started the better the prognosis. The science of psychiatry has progressed astoundingly during the last few years, so that incipient insanity can now be checked or cured just as can incipient tuberculosis.

It is necessary, then, that all who are handling pregnant women be more or less conversant with the signs and symptoms of impending insanity.

We have a social duty to perform, as well. Day by day, more evidence is being brought forth which shows the hereditary predisposition to be of inestimable importance in the etiology of these psychoses. It behooves us, therefore, to sound a warning and keep these facts ever before those contemplating marriage.

Finally, the insanities in relation to pregnancy can be likened to heart disease. When a heart has decompensated, pregnancy is absolutely interdicted; but when there has been no break or signs of an impending one, the good judgment of the physician must be depended upon for advice concerning the outcome. So it is with pregnancy and the psychoses: after one or more attacks, conception, or even marriage should be proscribed. The presence of poor heredity or individual instability should make one hesitant about advising pregnancy.

We must never be over-zealous in our proscrip-

tions, still we must be alert and ever ready with advice where our better judgment dictates.

CONCLUSIONS

1. Pregnancy and its sequelae are the precipitating factors in the psychoses but they do not determine the type.

2. Since infection and exhaustion are the immediate causes of a certain number of the insanities, greater effort must be made to eliminate them from pregnancy and labor.

3. Heredity plays an all important part in the susceptibility to a psychosis.

4. The relation of the endocrines, especially the ovaries, to these psychoses must be studied further.

5. Contraception or sterilization must be advised if recovery ensues after an attack or in the presence of insane ancestry.

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THE PRESENT STATUS OF THE TREATMENT OF SYPHILIS IN ADULTS

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The presentation of a paper on the present status of the treatment of syphilis in the adult, unless the subject be limited or modified in some way, cannot be done in the time allotted; so this paper will take into consideration only those procedures which are practicable for one in general practice.

That syphilis is relatively prevalent and its results disastrous, there can be no gainsaying. Osler is quoted as having said that "of the killing diseases, syphilis comes third or fourth," and his subsequent reinterpretation of these figures led him to place it first among the causes of death. As to its curability, few modern authorities feel that more than 75 per cent of the patients receiving adequate treatment will really be cured, or that the number receiving such adequate treatment is sufficiently large.

A study of the aforementioned facts seems to indicate that it is the duty of the physician in general practice to become as familiar as possible with the drugs and methods used in the treatment of

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syphilis, and to try to formulate some simple plan of treatment which, with some variations, can easily be carried out in his office. Of the drugs commonly used in the treatment of this disease, one thinks first of the arsenicals; then of bismuth, mercury and the iodids.

The first great stride in the treatment of syphilis since the discovery of the *Spirocheta pallida* in 1905 was the introduction by Ehrlich of the arsenic preparation Number 606, which he called salvarsan, and which in this country, since the war, is called arsphenamin. Arsphenamin is not, itself, a spirillicide, but becomes effective in the body by a process of oxidation which yields a more toxic substance with a very marked spirillicidal activity. Arsphenamin is said to be the most stable and effective of the arsenicals. It oxidizes very slowly, and the stability of the solution is much greater than that of some of the later preparations. Arsphenamin solutions are hemolytic, however, and one source of their toxic reactions is this tendency to agglutinate red blood cells.

Neo-arsphenamin. Ehrlich's Number 914, a later arsphenamin derivative, has obtained considerably greater popularity in general practice because of its ease of preparation and relatively low toxicity and the fact that its solutions are not hemolytic. It has, however, certain disadvantages, in that its arsenic content is only two-thirds that of arsphenamin and it oxidizes much more rapidly. If shaken, its toxicity may be increased many times. Many syphilographers rate its therapeutic efficiency as distinctly less than that of arsphenamin.

Sulpharsphenamin is closely related chemically to neo-arsphenamin, and is of importance in the treatment of syphilis because it can be administered intramuscularly. It is thought to be somewhat more effective than the former in the treatment of neurosyphilis.

Bismuth arsphenamin sulphonate, known as *bismarsen*, is one of the newer arsenicals used in the treatment of this disease. It was introduced in 1925 by Raiziss, and has since gained steadily in favor. Its results seem to compare favorably with the combined use of neo-arsphenamin and bismuth, and its action to lie about midway between the two drugs. It is slower than arsphenamin or neo-arsphenamin in effecting a disappearance of cutaneous lesions, but its results seem to be more lasting, with a lower percentage of mucocutaneous relapses. It is somewhat less efficacious in the healing of skin and bone lesions and interstitial keratitis, but it may be the drug of choice in the treatment of syphilis in older patients.

Finally, mention of *stovarsol* should be made, as it is the only one of the arsenical group which

has any effect upon syphilis when given by mouth. This property makes it adaptable to the treatment of infants and children. Oppenheim, of Vienna, gives from 10 to 200 milligrams daily in a single dose, depending upon the age. The drug is given in milk on an empty stomach for from three to five days, followed by a rest period of the same length of time. If keratitis is present, bismuth or mercury injections are used at the same time.

Bismuth was first used in the treatment of syphilis in 1921, and each year since then its use has increased in popularity. Many eminent syphilographers believe bismuth to be greatly superior to mercury in therapeutic value, and distinctly lower in toxicity. During the past five years many preparations of bismuth have been developed, water-soluble, fat-soluble, insoluble, colloidal and metallic. They vary in bismuth content from 10 per cent to 75 per cent or higher in some of the metallic preparations. The results given in the literature on the absorption of bismuth from the tissues after injection of different types of bismuth indicate that all types are well absorbed from the site of injection. However, the poorest absorption occurs with the insoluble products, so there may be some question as to the danger of cumulative action from the metallic bismuth preparations. Professor Emory, of Paris, states that "the action of bismuth is very effectual and absolutely innocuous. Specific manifestations yield rapidly and completely to this treatment, and in the immense majority of cases the disappearance is final."

The use of bismuth invariably results in the rapid disappearance of spirochetes from the surface of the chancre after the first or second injection. Healing of the primary lesion progresses more slowly than when one of the arsenicals is used, but the action on the involution of adenitis has been found more rapid with bismuth.

The influence of bismuth on the secondary manifestations of syphilis is rapid; almost as rapid as that of the arsphenamins.

In the treatment of visceral syphilis bismuth is thought by many to be the drug of choice. Its action in tertiary hepatic syphilis is slow, but this is deemed desirable, as it allows a slow involution and absorption of the lesions, with an opportunity for the establishment of a collateral circulation. It is also an admirable drug in the treatment of cardiovascular syphilis because of its slower, but efficacious action.

Bismuth is particularly valuable in the treatment of congenital syphilis, and because of its low toxicity and little local pain, may readily be given to children.

Mercury is one of the oldest drugs used in the

treatment of syphilis. It has been used for many generations. The drug may be administered as the metal, may be given with chalk, in blue ointment, or in gray oil, as one of its salts, or in organic combinations. Mercury has practically no spirillicidal effect in blood-stream concentration, but depends upon resistance-building effect for its value in the treatment of this disease.

Mercury was formerly much given by inunction of blue ointment, but of late it has become more and more difficult to obtain the cooperation of the patient in this effective method. Recently the intramuscular injection of soluble mercury preparations has gained in favor. Their absorption is rapid and the therapeutic action is prompt and non-cumulative, for little of the drug remains at the site of injection.

The more common salts in use are the red mercuric iodid, the succinimid, and the bichlorid. The insoluble salts are usually administered in suspension in oily or fatty bases. They have the disadvantage of being more likely to cause cumulative effects, and when used should be given with longer intervals between the doses.

More recently, colloidal mercury sulphid was developed by Hille, and is said to be particularly effective in Wassermann-fast cases.

The action of the *iodids* is somewhat less understood, but their value seems undoubted. The tolerated dose of the drug has no spirillicidal action and it apparently does not influence the blood Wassermann reaction, but it does aid in the resolution of granulomatous tissue. The *iodids* may be given either by mouth or intravenously. Osbourne believes there is a definite superiority in intravenous injection of sodium iodid, as compared to oral administration of potassium iodid in increasing the iodine content of the spinal fluid.

Clinically, potassium iodid is regarded as more effective for oral administration than sodium iodid, but it is also somewhat more irritating to the gastro-intestinal tract. Potassium iodid may be used orally as a one to one solution in doses of from 10 to 100 grains three times a day, starting with the smaller dose and gradually increasing until tolerance is obtained. Dilution markedly increases the tolerance for the *iodids*, and they should always be taken well diluted, before meals.

In a general way, we have indicated some of the salient characteristics of the drugs more commonly used in the treatment of syphilis. Now we should be able to formulate some plan of treatment which could be considered adequate, but actually, that is not so easy for one not an experienced syphilologist. However, there are certain fundamental points which we shall mention.

The first is that the time which offers the best

chance for complete recovery is in the early stage of the initial lesion. When the initial lesion occurs, the spirillae are widely disseminated throughout the body, but they soon become localized and more inaccessible. The longer treatment is delayed, the less likely is a complete recovery to result. Therefore, a dark-field examination of every suspicious sore should be made and if negative the first time, this should be repeated on each of three successive days. Dr. Alcock states, "It should not be considered unreasonable to send a patient with a suspected initial lesion a hundred miles or more for a dark-field examination, and consequent early diagnosis with early treatment."

At the beginning of treatment a thorough physical examination should be made, in order to know the type of patient with whom one has to deal. Before each treatment, the patient should be questioned as to the effects of the previous treatment, so that one may know of a possible incipient reaction. In the latter case the treatment would be discontinued in order to avoid serious trouble.

In an early case in a robust adult, many men engaged in this special field of work advise the use of eight intravenous doses of arsphenamin. The first two or three doses should be smaller than those recommended for the weight of the patient, to make sure of a normal tolerance for arsenicals.

For the man in general practice, because of the difficulty of preparing and giving arsphenamin, the use of ten doses of neo-arsphenamin given at five-day intervals may be substituted. No matter which form of arsenical is used, it should be accompanied by the intramuscular injection of some soluble bismuth preparation which greatly enhances the effectiveness of the treatment.

This course of arsphenamin or neo-arsphenamin and bismuth should be followed immediately by twenty bi-weekly intramuscular injections of a soluble mercury preparation or ten weekly injections of some insoluble mercury preparation. This will terminate the first course of treatment, and at this time a Wassermann test should be made; but, regardless of its reaction, the above course should be repeated and a Wassermann test again made. This course should again be repeated, unless some intervening complication prevents, when the patient will have had continuous treatment for one year. At this time he should have another blood Wassermann test and the spinal fluid should be examined.

The second year may be divided into three trimonthly periods, with a rest of one month following each period. During the first month the patient should receive weekly intravenous injections of arsphenamin or neo-arsphenamin, and intramuscular injections of bismuth, and the fol-

lowing two months, weekly intramuscular injections of mercury, with potassium iodid by mouth.

During the third year a rest period of two months between each course of treatment may be allowed.

If the patient proves to be Wassermann-fast, that fact must be accepted as one of the unfavorable terminations, but he should not be damaged by over-treatment. If the cerebrospinal fluid is positive, the case demands more than simple intravenous and intramuscular treatment. A course of Swift-Ellis intraspinal injections of arsphenaminized serum or *tryparsamid* should be given.

In the occasional case in which it is difficult to enter the vein, intramuscular injections of sulpharsphenamin or bismarsen may be substituted for arsphenamin or neo-arsphenamin.

Stokes and his co-workers, in a paper written a year ago, entitled "An Appraisal of the Newest Arsphenamin Synthetic, Bismarsen, in the Treatment for Syphilis," reaches the following conclusions: "The spirillicidal and healing action of bismarsen, though slower than that of arsphenamin, does not, apparently, militate against an ultimate curative effect in early syphilis, equal and even superior, to that of other standard arsphenamins, combined with bismuth or mercury." "The effect on the Wassermann reaction in early syphilis is excellent and lasting." "The proportion of all forms of relapse in early syphilis was 12 per cent, as compared with from 20 to 40 per cent treated with other drugs." "There is evidence that intermittent, is less effective than continuous, treatment, with this drug." "The field of greatest promise for bismarsen appears to be that of early syphilis. In this field the authors commend its use in continuous treatment, without rest intervals, two injections per week to as near forty injections as possible."

In the majority of cases of tabes and paresis, the ordinary treatment with arsphenamin has not been attended with good results. For this reason Swift and Ellis devised a procedure, which was later modified by Ogilvie, for injecting arsphenaminized serum directly into the spinal canal. Since this is a procedure not likely to be carried out by one in general practice, a description of the technic will be omitted.

The use of *tryparsamid* was first introduced by Brown and Pearce in 1919. It is now one of the standard remedies used in treating syphilis of the central nervous system. The drug is used in one-gram doses given intravenously twice a week for four doses, then gradually increased to two or three grams twice a week, until a total of ten doses has been given.

Throughout the treatment careful watch of the

eye-grounds must be kept, because of the liability of the drug to injure the optic nerve, retina, and choroid plexus. If the eye-grounds show no change, a similar course is given after a month's rest; and so on, until three to six courses of treatment have been completed. During each course mercury should be given once a week.

Particularly in paresis, and, to a lesser extent in tabes and cerebrospinal lues, the production of a sustained fever by the inoculation of malaria has given some considerable success. Its use is not without danger, and must be carefully controlled in an institution.

SUMMARY

Syphilis is such a common disease that a considerable percentage of the patients affected must be treated by the man in general practice.

Because of the time and persistence necessary in carrying out a proper course of treatment for a case of syphilis, a rather small percentage are adequately treated, and of those receiving good treatment, too small a number are permanently cured.

Arsphenamin or neo-arsphenamin, accompanied by bismuth and followed by mercury in definite courses, with little or no rest periods for the first year, and only short rest periods for the second and third years, with careful watching of the Wassermann reaction and spinal fluid, probably offers the best chance for recovery.

Such an active course of treatment cannot be carried out without danger of reactions and untoward results. Unusual care and watchfulness must be maintained to reduce these to a minimum.

Discussion on Dr. Throckmorton's Paper

Dr. Clarence E. Van Epps, Iowa City: The diseases of the nervous system are a very important part of general medicine. As you know, I started out with general medicine. I have also had a special interest in neurology. In the last ten years since the war I have devoted my time almost entirely to neurology. I understand its relation to general practice. Maybe I am partial to neurology, but I think it is the most interesting part of general medicine.

One of the best proofs of its importance is the amount of space given to the subject in the textbooks of Osler and Cecil. It so happens that both have devoted exactly 237 pages to it. This is as much space as is given to the common infections and more than is given to diseases of the chest. Neurology is not a specialty in the same sense that are eye diseases and ear diseases. It might be compared rather to diseases of the digestive tract, which are often treated as a specialty. They are, however, very important in general practice although less space is devoted to them than to neurology in the textbooks on medicine.

Dr. Throckmorton has referred to the inferiority

complex in regard to neurology. This is undoubtedly true, and may be due to the supposed connection of neurology with psychology. There is no psychology in organic neurology, any more than there is in any other disease. Nor am I sure that functional neurology has been materially aided by technical psychology. The difficulties of diagnosis and of therapeutics are no greater than those in diseases of the abdomen.

Neurology is usually discussed in the latter part of the textbooks on medicine. This is because the best is reserved to the last.

If you will allow yourself to develop an interest in neurology you will find pleasure in tackling its diagnostic problems, many of which are of great importance in general medicine.

Dr. Throckmorton has covered the major syndromes. We might add that you should also learn to use the ophthalmoscope. With a little practice you can recognize the major changes in the fundi. It should be used in every case just as you use your stethoscope. In this way the examination will soon consume little time, and you will be able to rely on your own findings.

A very important part in any diagnosis is taken by the history. This takes more skill and time than the physical examination. If one checks the history and physical signs against each other it becomes a very stimulating and interesting game. Every time I take a history I try to make the diagnosis without touching the patient. If you try to do that as you go along you will be picking up a lot of things. Once in a while I make very bad breaks. I think from the history that I am going to find so-and-so, but it is not borne out by the physical signs. The physical signs are especially helpful in locating pathology, and the history in determining its character.

Functional disease is very common. Excluding organic disease requires the greatest care. In cases of any doubt insist on repeated examinations. We must not forget that a functional case may develop organic trouble. I have called cases functional and I have called them neuralgic when in reality they were sarcoma of the backbone. After that has happened a time or two you become very sensitive about it. One of the most common mistakes is to say that a patient has neuritis. These cases of neuritis usually turn out to be arthritis, bursitis, malignancy, psychoneurosis or tabes. Neuritis is a rare thing.

Dr. Throckmorton's paper should be very helpful to you in stimulating an interest in a most important field of general practice.

Discussion on Dr. Abbott's Paper

Dr. B. Raymond Weston, Mason City: This excellent covering of the subject of sympathectomy for cardiac conditions by Dr. Abbott leaves so many things you would like to discuss, but in the few minutes available, you have to confine yourself to one thing. I choose to confine myself to what I consider the most important thing to me: how does this procedure fit into our plan of things, and to what extent can we use it to get results in our own work?

In making up your minds as to what you are going

to do, you have three things to help you. The first is your personal experience; the second, the experience of your friends, and the third, the literature. There may be some who have not gone over the literature very thoroughly. You are going to be confused by a number of things.

In the first place, Coffey took out the superior cervical ganglion and got results. Jonesco removed the whole chain and did not get relief of pain in all cases. Somebody else may take out the stellate ganglion and get results, in spite of the fact that the cardiac branches from the superior, middle and inferior cervicals go to the heart.

The man who takes out the superior cervical ganglion gets results in some cases, in spite of the fact that anatomists and physiologists say that the sensory fibers do not go above the middle cervical ganglion. By the time you get that far you are confused. We know that from the morphologic standpoint we have indefiniteness in the anatomy of the sympathetic nervous system. Sometimes there are two ganglia instead of one and sometimes two are united and there may be great variation in fiber tracts.

When Hunter came forward with his work, everybody tried it for everything, practically from the hip down. The result was a number of failures, and many physicians were antagonistic to Hunter's work and similar work of other men.

We know there are certain arthritides which we can separate by thermic tests, with good results. There are certain arterial diseases in the lower extremity in which you can pretty well depend on getting palliative results with sympathectomy. What is palliation? If a man has a normal expectancy of twenty years, and you can completely cure him, he lives twenty years. If you give him palliative treatment, he lives two or three years. Palliative results condemn no procedure.

Now we have got down to certain definite things. Sympathectomy will not cure everything from the hip down. There are certain definite things associated with sympathectomy. We must adopt the same attitude concerning the cervical ganglia. We are going to find out that certain definite procedures will work in certain conditions. Dr. Abbott has taken the stand at the present time that the alcohol injection is superior to surgery. I am not at all convinced that this is true.

In conditions as severe as angina, seven per cent mortality does not seem particularly formidable to me. On the other hand, we know that as time goes on the procedures will become standardized, and the mortality will go down. I cannot see anything particularly formidable in removing a superior cervical ganglion, nor is the posterior removal of the superior thoracic ganglion formidable to the surgeon.

Why do you get favorable results in one case and not in the next? The enthusiasts rush in on these things. Many of them have lost their interest, and have left the men working on it who have a feeling that there is something in this thing. They will eventually develop a dependable procedure. They thought they were going to get at the depressor nerve,

cut that off, and get results. It was a little difficult to find, and the results were disappointing. Other procedures have also failed.

However, they are not going to blackball the whole thing because the enthusiasts (I simply use that word for lack of a better one) cease to pay a great deal of attention to it. I think everyone practicing surgery and everyone practicing medicine can keep an eye on it because the literature will be conservative. It will develop just as sympathectomy elsewhere has developed. We are learning about the autonomic nervous system. It will pay everyone to keep his eye on it.

Discussion on Dr. Crowder's Paper

Dr. R. A. Stewart, Independence : Mr. President, Members of The Iowa State Medical Society, and Guests: I have been very much impressed by Dr. Crowder's paper, and I have found it especially interesting because it was not written by a psychiatrist.

Dr. Crowder has stated that psychoses associated with pregnancy conform to some type of insanity in the general classification of mental disease, and they are not peculiar to childbirth or the puerperal period which, however, is the precipitating factor. That his position is correct is proved by the fact that attacks of manic-depressive psychosis, of dementia praecox, of epileptic psychosis, and of psychosis with mental deficiency subsequent to pregnancy do usually occur, leading one to conclude that this is of hereditary etiology, which can usually be determined definitely. In my opinion the heredity in the above types is very high, certainly about 100 per cent. The toxic exhaustive type of psychosis in pregnancy is interesting in that although the toxic condition is found, frequently in the form of nephritis, one cannot always eliminate the stuporous type of catatonic dementia praecox until the temperature and urine have been normal for some time and convalescence is well established. Usually, however, there is soon noticed typical negativistic signs and impulsivity if the case be one of catatonic dementia praecox. It is interesting that nephritis is common in the female catatonic patient, but quite unusual in the male, and it makes the prognosis very grave.

The statement that 60 per cent of the cases of manic-depressive psychosis are hereditary and the balance show an instability is quite in accord with my experience, which is that a defective heredity can usually be found if sought.

I have never known of a therapeutic abortion for insanity. The few cases of manic-depressive insanity complicating pregnancy have been of the manic or mixed types, but by far the greatest number of pregnant women admitted are cases of the catatonic type of dementia praecox.

I feel that the terms "mental breakdown" or "nervous exhaustion" are synonyms of insanity, but to avoid mistakes, it is an excellent idea to secure a careful anamnesis. Our manic-depressive cases with pregnancy run a course of a few months to several years, and termination of pregnancy does not re-

store the patients mentally, by which I mean that the psychosis runs its course.

I know of no cases of dementia praecox having been cured if secured early. Some become much better for a time, especially the catatonic type.

Amenorrhea is often found in the badly disturbed cases, but as the patient becomes quiet and gains in weight the menstrual flow returns, even though the patient deteriorates mentally.

We are using ovarian extract, 2 gr. daily, in involutional melancholias. Some patients have improved, but they might have improved without it.

Unfortunately, the young people do not often consult a physician before getting married, and when they do, may the physician not lose a friend and client unless he refers the case to a psychiatrist? This is a broad subject, and it will continue to be such until a carefully framed eugenic law has been in successful operation for many years.

Discussion on Dr. Collesler's Paper

Dr. John M. Pope, Cherokee: Dr. Collesler's paper is very complete and there is little left for me to say on this subject. I wish to substantiate a few facts that we must face. With regard to neurosyphilis, from eight to ten out of every hundred new patients admitted to the Cherokee State Hospital are neurosyphilitics. Nine out of ten inform us they never have had antisiphilic treatment, which refutes the old supposition that arsenics predispose to neurosyphilis.

While it is commendable to stress achievements, it is a virtue to admit failure. This fact should spur us to further research. The medicine, since Ehrlich, justly claims the greatest scientific achievement in the treatment of syphilis in its acute, secondary and tertiary or gummatous stages.

Our treatment of neurosyphilis is in the experimental stage and I even doubt that we are on the right track. In one form of neurosyphilis, general paresis, the results are practically nil. At the Cherokee State Hospital, we have tried out three kinds of treatment: (1) the arsphenamin and mercury form, (2) the Swift-Ellis form, (3) the malaria form. The Swift-Ellis treatment gave us slightly better serologic results, by giving a negative blood Wassermann reaction but never a negative spinal fluid Wassermann reaction. The mortality rate is the highest with the malaria treatment. Our patients have had remissions of longer duration.

However, can we call the results favorable when we prolong the life of patients with defective intellects and bring them down to earth from their dreamy lands? Who dares to release to society these individuals who, when flaring up, commit the most cruel social crimes?

One more point I wish to stress: in my tissue examinations I have never been able to find spirochetes in the blood of patients we have treated with arsphenamin and malaria.

Dr. Murdoch Bannister, Ottumwa: I should like to ask Dr. Collesler his opinion of silver salvarsan in the treatment of beginning tabes. That is the one

arsphenamin with which I have had any definite results in the treatment of tabes. He did not mention it.

I should also like to ask him if there is not a great deal of danger in the use of any of the arsphenamins where the vision is involved in syphilis. In many cases they have done more damage than good in the treatment of syphilis where the retina is involved.

I think we sometimes do a great deal of damage in kidney involvements with arsphenamins.

General Discussion

Dr. Christian B. Luginbuhl, Des Moines: Mr. Chairman and Members of the State Medical Society: I have nothing to add to any of these papers, but I do want to emphasize some of the things that Dr. Abbott has mentioned. There are undoubtedly some good things going to come in the treatment of angina pectoris in a surgical way, but before they are undertaken we must be sure that the cases are adapted for that form of treatment. We know that an individual who has precordial pain lasting from half an hour to an hour, requiring the use of three-quarters to a grain or a grain and one-half of morphin, followed by an elevation in temperature, perhaps a precordial friction rub, and increase in leukocytosis, probably never will be a fit subject for the treatment that Dr. Abbott has described.

In elderly individuals, in the late sixth and the seventh decades, it is questionable whether any radical surgical procedure should be undertaken. The injection of some form of cocain such as procain or novocain, or the use of alcohol can be tried. We must remember one thing, however, that if such treatment is instituted we are masking our symptoms in that individual. However, the discomfort these patients feel in the region of the heart, perhaps shortness of breath, will, in a measure, still call for conservative treatment.

In the treatment of syphilis of the central nervous system, Preble some years ago emphasized the fact that the individual should be treated first with the iodids, the mercurials, and perhaps later on with very small doses of some form of arsphenamin.

If we get untoward symptoms following the treatment, if the cardiac symptoms or the cerebrospinal symptoms are aggravated, it is time for us to quit. I believe it is a good rule that if an individual past the age of sixty-five has a Wassermann-fast blood we leave him alone. You may be so unfortunate as to have someone tell that individual he has lues, and very drastic treatment will be instituted. I remember one case where the patient became blind, had paresis, and what not, following such treatment. He probably would have lived his expectancy had he never been treated. It is a very good rule, therefore, either to leave these patients alone or to give them very conservative treatment.

Dr. Tom B. Throckmorton, (closing): I have nothing further to add except to state that in the paper, which I was unable to read on account of brevity of time, there are quite a number of details and some elaborations of these various topics that I could not

bring out in my informal talk. However, I want to take this means of thanking this long-suffering audience for listening so attentively through this symposium on nervous and mental diseases. Particularly do I want to thank my old friend Dr. Van Epps, who came all the way from Iowa City to open the discussion on my paper.

Dr. Walter D. Abbott (closing): I appreciate the discussion on such a technical subject as pain relief in angina pectoris.

I think, as Dr. Weston has emphasized, our wave of enthusiasm is playing out. If you view neurologic surgery as a whole, it is a new specialty, and we have had enthusiasts. What we are trying to do now is to get our feet on the ground and approach this subject from a sane, sensible standpoint.

The question of operation versus injection, as Dr. Weston states, still remains to be solved in the future, but even as a neurosurgeon views the case (and I think perhaps we are a little more radical than the general surgeons when we do operate,) I have a respect for the mortality which is rather high. I cannot conceive of performing such a formidable and dangerous operation on a patient with a badly damaged heart. We would not remove the gall-bladder, unless we had to, from a patient who had recurrent attacks of cardiac pain. We would rather tide the patient over with some simpler method.

This subject applies to all of us. We all see angina pectoris. Some of us may have it and die from it. I think we should approach it very safely and sanely and be extremely conservative. I think if I were to have angina pectoris and the first attack did not prove fatal, and I suffered repeated attacks, I would much rather spend the few remaining months or years of my life in the comfort which is afforded by alcohol injection. Many internists fear that the symptoms will be masked, as Dr. Luginbuhl has emphasized. They will be to a certain extent, but the warning signal is not removed in these cases.

I think if we talk the conditions over with the patients beforehand, explaining to them that their old acute pain will be gone but that they will have a heavy, smothering sensation on exertion, most of the patients will be willing to take this risk; I know I would myself. If I ever am unfortunate enough to suffer from angina pectoris, I would appreciate having an injection of the sympathetic ganglia performed upon me.

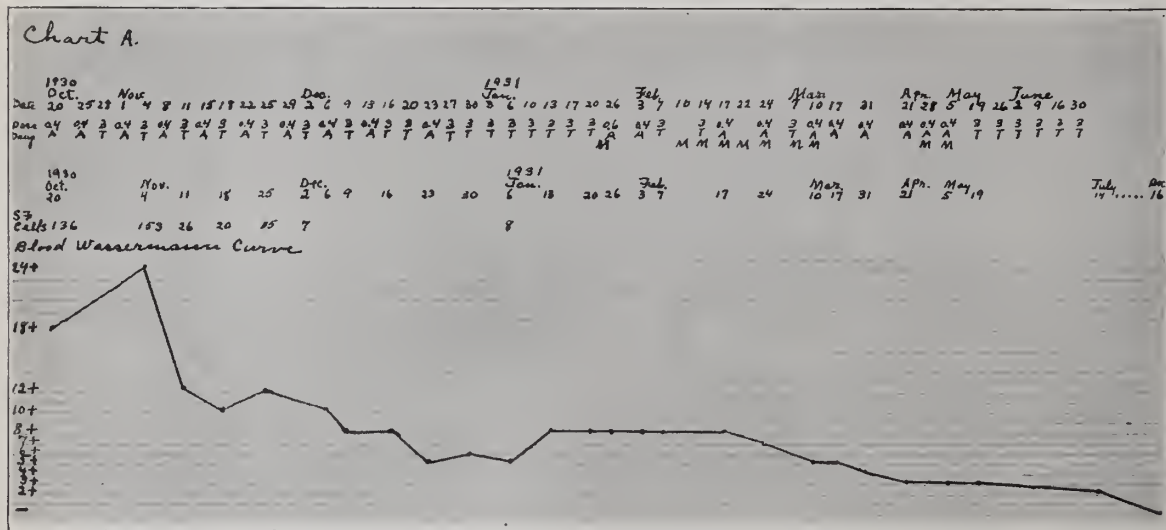
Dr. Roy E. Crowder (closing): I have nothing to add in the way of subject matter but I want to emphasize the fact that there are certain warning signs that may be found. If they are looked for they will be found in individuals who have an hereditary predisposition, that is, in the immediate family or farther back, someone showed signs either of true insanity or instability in one way or another. Alcoholism is frequently spoken of as a reason for insanity in the family. I think an alcohol addict is simply an unstable individual who covers up his lack of adjustment by inebriety. Suspected patients should be placed under the care of a competent psychiatrist at the earliest possible moment.

THE REPORT OF A CASE OF SEVERE AND NEGLECTED SYPHILIS*

MARY H. SWAN, M.D., Chicago

A young woman twenty-eight years old was referred to the care of Dr. Homer S. Warren, Sr., the latter part of October, 1930. Her body was broken out with ulcerated, red, indurated lesions. Some of them measured more than an inch in diameter. Figure 1 illustrates the condition better than any explanatory words. She had had a rash

positive. The examination of the spinal fluid showed 136 cells, a strongly positive globulin and a Lange colloidal gold curve of the general parietic type, 5555111000. The Wassermann test of the spinal fluid was not made until November 25 and at that time was strongly positive with 0.1 c.c. of spinal fluid. The blood Wassermann test was titrated on October 20 and subsequently. The record of the Wassermann curve in relation to treatment and also the cell count of the spinal fluid is shown with explanatory remarks in Chart A.



EXPLANATION OF CHART A

The top horizontal row of dates represents days treatment was given.

The next line indicates the amount of dosage. The dose usually employed was 0.4 Gm. of arsphenamin and 3 Gms. of tryparsamid.

Below the dosage the drug is indicated. A.=arsphenamin; T.=tryparsamid; M.=mercury.

S.F. cells represent the spinal fluid cell count. The number of cells is indicated on the dates the count was made.

The lower horizontal line of dates represents the days the Wassermann test was performed. The amount of positivity is shown by the figures along the left vertical end of the chart. The estimation is

by my¹ method of adding four plus to the reading for every additional two units of complement completely fixed or bound by 0.1 c.c. of patient's serum. For example: 24 plus means that 0.1 c.c. of serum gave a reading of four plus in the presence of 12 units of complement, or six times the amount employed in the routine test.

For the work, fifteen-hour icebox fixation with ten minutes in the warm bath and the Kolmer antigen was employed. The native amboceptor was not absorbed from the patient's serum. Amboceptor was titrated daily. Complement was titrated in the presence of antigen and 0.02 c.c. of normal serum. The second clear tube at the end of one-half hour of the second incubation was used as the unit. Amboceptor and sheep's cells were added separately.

of early secondary lesions about six months previously.

On October 20, 1930, a small amount of spinal fluid was withdrawn, blood was taken for Wassermann and Kahn precipitation tests and 0.4 Gm. of old arsphenamin was administered. Both the Wassermann and Kahn tests were very strongly

It is interesting to note that after the first few injections of arsphenamin not only did the strength of positivity of the Wassermann test increase, as often occurs, but also the cells of the spinal fluid rose from 136 to 153. It is of further interest to observe that when the curve of the Wassermann positivity dropped abruptly between November 4 and 8 the number of cells also fell sharply from 153 to 26. The cells of the spinal fluid came to

*Presented before the Thirty-fifth Annual Meeting of the State Society of Iowa Medical Women, Sioux City, May 4, 1932.

a normal count promptly, December 2, and before the Lange colloidal gold registered any improvement.

The patient fortunately stood the active treatment very well. She received regularly either arsphenamin or tryparsamid from October 20, 1930, to the end of March, 1931. She rested the first three weeks in April. From April 21, 1931, to the end of June she had regular treatments. At the end of June the patient was feeling well, the sores were entirely healed and the blood Wassermann test was down to three plus. The patient at this time began neglecting treatment and reported less often. She had one injection of tryparsamid in July, two in August, three in September, four in October, two in November and two in December. Mercury was given mostly in the form of gray oil but a small amount of mercury salicylate was used intravenously.

By the end of December, 1931, the patient had a negative blood Wassermann test and a weakly positive Kahn test. The spinal fluid showed no cells, a negative Lange, a slightly positive globulin, a Wassermann negative with 0.1 c.c. and 0.2 c.c., weakly positive with 0.5 c.c. but strongly positive with 1.0 c.c. of the spinal fluid. The Kahn test of the spinal fluid was still strongly positive.

Examination of the Wassermann curve of the blood shows some fluctuation after the first abrupt fall of November 8, 1930, to January 13, 1931, but from January 13 it remained stationary at eight plus to February 17. From this point there was a slow decline which continued to a final negative on December 16, 1931. No Wassermann test was made between July 14 and December 16, 1931.

The determination of the Kahn units² on the blood was made the first time on December 6, 1930, and the reading was forty units. On December 30 the quantitative Kahn units were 20



Fig. I. The condition of the patient October 20, 1930.

and remained 20 to February 24, 1931. The reading of units fell to 4 on March 10 and continued at 4 until May 19, 1931. On July 14 the routine Kahn test was three plus and was one plus December 16, 1931.

The patient at the present time is the picture of health and feels entirely well. With continued treatment it would appear there is a good chance

CHART B

SPINAL FLUID EXAMINATION

Date	Cells	Globulin	Lange	Wassermann Amount of Spinal Fluid				Kahn Precipitation Test
				0.1 c.c.	0.2 c.c.	0.5 c.c.	1.0 c.c.	
Oct. 20, 1930	136	Strongly Positive	5555111000					
Nov. 4, 1930	153							
Nov. 8, 1930	26							
Nov. 18, 1930	20							
Nov. 25, 1930	15			4+	4+	4+	4+	4+
Dec. 2, 1930	7							
Jan. 6, 1931	8	Strongly Positive	555555100	—	4+	4+	4+	4+
Dec. 28, 1931	0	Slightly Positive	0000000000	—	—	1+	4+	4+



Fig. II. The patient after healing of the lesions.

that the serology of both the blood and spinal fluid will become negative.

I desire to express my appreciation to Dr. Homer S. Warren and to Dr. Josiah J. Moore through whose courtesy this patient is presented. I also wish to thank Dr. Paul G. Dick for taking the pictures.

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55 E. Washington St.
Chicago, Ill.

INDIGENTS JUDGED TO BE WARDS OF COUNTIES—NOT OF DOCTORS

In the November issue of the *Nebraska State Medical Journal* an editorial, originally appearing in that *Journal* of February, 1931, is reprinted in its entirety. This editorial is well worthy of reprint, because it outlines (since 1884) the court action invoked to decide the rights of physicians in that state and to indicate the obligations of the counties with reference to the poor and indigent who may become ill or injured and require the services of a physician. Court decisions indicate

that the service of a surgeon or physician cannot be required by a county board as a matter of charity. Acting in cases of emergency, a physician may hold the district liable, although he acted without the request or consent of the person designated as overseer of the poor. In a proper case the physician may hold the district liable, even in the face of the refusal of consent if unlawfully or arbitrarily withheld. Neither the county commissioners nor the town supervisor can turn their backs upon the proper claim of a poor person; nor can it be said that the unfortunate pauper who has met with an accident requiring instant succor, is not to be remedied immediately. The county or the town must provide for him as soon as they may. Instances where county boards have refused to allow physicians' bills have occurred in Iowa and while the actions cited above are taken from the Nebraska laws, in general they are parallel by like statutes in this state.

HOSPITAL INSURANCE IN DALLAS, TEXAS

There are two hospital insurance plans now operating successfully in Dallas, Texas, where the Baylor and Methodist Hospitals have separate contracts with several thousand employed persons.

For the payment of 50 cents a month, the hospital agrees to provide, without extra charge, hospital service when needed for a period not to exceed 21 days during a 12-month interval. After 21 days the beneficiary is given a one-third discount on regular and special hospital services required during an illness.

Contagious, tuberculous and mental cases are not included in the benefits after they have been diagnosed as such. Obstetrical cases are granted 50 per cent discount on hospital services.

The financial experiences of the Baylor and Methodist Hospitals indicate that the plans in effect are actuarially sound. In one hospital the average receipts per patient-day of care were \$6.60, in the other \$7.60. It was found that approximately 10 per cent of the members used the service a year, and that the average length of stay was approximately nine days. Both of the Dallas hospitals are convinced that the total revenue from these members is greater than would have been paid by the individual patients on a private-fee basis for hospital service.

The experience of these Dallas hospitals lends color to the statement of C. Rufus Rorem, of the Committee on the Costs of Medical Care, who, in his book, *The Crisis in Hospital Finance*, states that voluntary sickness insurance on a group basis is steadily growing in favor, and may offer one valuable approach to the problem of rendering an adequate medical service to persons of modest income at a cost which may be easily met.

STATE HEALTH COMMISSIONER'S PAGE



W. C. Strickland, M.D.



PSITTACOSIS OR PARROT FEVER

Psittacosis is an acute, highly invasive, infectious disease of the parrot, parrakeet, love bird family and which may occur in other birds and animals and in man. The infection is rarely transferred directly from man to man.

Armstrong reports 185 cases occurring in 1929-1930, fifty-five of which were traceable to parrots, four to parrakeets, three to love birds, three to canaries and nine to multiple bird exposure.

Incubation period: Six to sixteen days, seldom longer.

Sex and age distribution: The sexes are equally susceptible, although more females are affected. The patients are mostly adults, twenty to fifty-five years of age. More adults and more females are closely associated with the care of infectious birds.

Diagnosis, symptoms, and complications: The onset is usually accompanied by chills or chilly sensations, headache and fever. The temperature gradually rises, as in typhoid, although the pulse is slow. Nosebleed is not uncommon. Anorexia and constipation may be present and the tongue may be coated. Local lung lesions may be found early or after a few days. There is an early rasping cough with no expectoration; expectoration may occur later. The sputum is not bloodstreaked. Abdominal distension may be marked and rose spots occasionally appear. Albuminuria and retention of urine may occur. There is a leukopenia after the first days. The disease at first resembles influenza, later typhoid, with symptoms suggestive but not typical of pneumonia.

History of exposure to sick birds or birds recently acquired, together with the clinical picture, should be sufficient to make a diagnosis. (The

most frequent complication is phlebitis.) Relapses are common.

Prevention: Any sickness in birds harbored in the home should be looked upon with suspicion. Newly acquired birds in the home should be regarded as suspicious carriers. Prevention depends upon avoidance of direct or indirect contact with infected birds. In a suspected or known case, the patient should be isolated. Nose, throat, bowel and bladder discharges should be disinfected or burned. Bed and body linen should be disinfected.

Interstate quarantine regulations: Transportation of parrots, parrakeets, and other birds of the psittacine family:

"No person, firm or corporation shall offer for shipment in interstate traffic, and no common carrier shall accept for shipment or transport in interstate traffic, any parrot, parrakeet, love bird, macaw, cockatoo, lory, lorikeet, or any other bird of the parrot or psittacine family, unless an accompanying certificate has been obtained from the state health authority to the effect that to the best of the knowledge and belief of such authority such bird as may be offered for shipment has originated from an aviary, or other distributing establishment, free from psittacosis infection."

Eleven cases of psittacosis have recently been reported in Wisconsin; nineteen cases have been reported in Minnesota, two of these patients living on a rural mail route out of a town in Iowa.

Reports: Frank or suspected cases should be reported at once by telephone (reversing the call) to the Bureau of Preventable Diseases, State Department of Health (4-9111, Extension 113), Capitol Building, Des Moines, Iowa.

PREVALENCE OF DISEASE

Disease—	Oct. 1932	Sept. 1932	Oct. 1931	Most Cases Reported From
Diphtheria	97	31	76	Polk
Scarlet Fever	164	84	119	Polk
Typhoid Fever	41	69	25	Hardin, Harrison, Webster
Smallpox	11	11	73	Clayton, Pottawattamie
Measles	7	8	16	(For State)
Whooping Cough	34	28	61	Des Moines, Black Hawk
Cerebrospinal Meningitis	3	2	4	(For State)
Chickenpox	207	17	126	Dubuque
Mumps	25	11	19	Des Moines, Allamakee
Poliomyelitis	9	18	44	Polk
Tuberculosis	47	37	50	Scott
Undulant Fever	3	15	4	Hancock, Scott, Wright
Syphilis	229	210	216	(For State)
Gonorrhea	248	279	373	(For State)

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MAINTAINING EQUILIBRIUM

At a recent address in the series of postgraduate lectures being sponsored by the Speakers Bureau, the speaker related his success in curing cases of epilepsy by the performance of a sympathectomy. The report of the brilliant results obtained in the use of this procedure has provoked much discussion since it seems that his results have not been duplicated by other experiments in this field. The opening of a new field in medicine or surgery is accompanied by a rush of enthusiasts whose reckless abandon often throws a valuable therapeutic aid into disrepute. Such is the case in surgical procedures upon the autonomic nervous system.

Since Alexander's original ganglionectomy in 1896 numerous operations have been devised in the hope of curing many chronic and apparently hopeless diseases.

However, as in other branches of surgery, experience has proved that no form of surgery is successful unless it is founded upon the sound fundamental principles of anatomy and physiology. While it is true that sympathectomy has been a boon to the treatment of peripheral vascular diseases, these conditions must be carefully studied before submitting an already long suffering patient to experimental surgery. The clinical knowledge gained in the past two decades bears out the contentions of the anatomists that periarterial sympathectomy is not a complete method of interrupting the vasoconstrictor fibers. As far back as 1914 Kramer and Todd and Potts demonstrated that the sympathetic nerve supply to peripheral vessels was segmental, similar to the musculocutaneous innervation of the extremities. Since

these original contributions, Ransom and Kuntz, among others, have corroborated this anatomic view.

Guided by these fundamental principles clinical investigators proceeding cautiously have demonstrated their ability to increase the blood supply to an extremity by increasing the caliber of unoccluded vessels with the removal of the sympathetic vasoconstrictor fibers. Thus a new ray of hope was held out to unfortunate sufferers with Raynaud's disease, thromboangiitis obliterans and trophic ulcers. No thought of opening an occluded vessel was conceived so that the therapy was directed toward the patent collateral vessels and thus arteriosclerosis and diabetic gangrene still remain an enigma except in reference to relief of pain by removal of the afferent pain fibers. Other baffling conditions, such as cord bladder, Hirschsprung's disease and spastic constipation have responded to the removal of inhibiting sympathetic fibers but these procedures also were dependent upon the close cooperation between anatomist, physiologist and surgeon. The phase of pain relief in reference to the interruption of visceral afferent fibers, traversing the sympathetic ganglia has been an epoch making achievement but here also there has been an adherence to fundamental facts rather than surgical fancy. It savors of Aladdin's lamp to hope that a condition such as epilepsy will respond to a simple procedure upon the autonomic system when over three thousand publications in reference to this subject have appeared in the medical literature. It must be remembered that Alexander's original operation was for epilepsy and in the past thirty years many others have ventured, failed and consigned their short lived hopes to the limbo of dreams.

Thus it is necessary to stress the importance of maintaining our equilibrium in the selection of cases for sympathectomy, bearing in mind both the foundation of proved anatomic and physiologic facts and the fact that the work along this line has been reported solely as an interesting experiment and not a proved or tested clinical fact. As physicians it is our sacred duty to appraise each new therapeutic aid with a cold scientific eye instead of being swayed by theories. While we should make every effort to acquaint ourselves with the possibilities of new procedures, we must be ever mindful of fundamental principles and adopt new therapeutic aids only when they have been proved by controlled experiments, lest we be guilty of human exploitation.

Final Report of the Committee on the Costs of Medical Care

Pain, sickness and bereavement have shadowed mankind throughout the ages. Today there is a vast amount of unnecessary sickness and many thousands of unnecessary deaths. Because of the marvelous advances during the last fifty years many conditions which were considered hopeless in former generations are today amenable to treatment. We have the knowledge, the technics, the equipment, the institutions and the trained personnel to make even greater advancement during the next fifty years. As a result of our failure to utilize most fully the results of scientific research, the people are not getting the service which they need—first, because in many cases its cost is beyond their reach, and second, because in many parts of the country it is not available.

Conscious of this unsatisfactory situation, some fifteen leaders in the fields of medicine, public health, and the social sciences came together for a conference in Washington on April 1, 1926. It was not until February, 1928, however, that a research committee was actually organized and began work.

The Committee, for most of the five-year period, has consisted of fifty members representing the fields of private practice, public health, medical institutions and special interests, the social sciences and the general public. The labors of the Committee have been reported from time to time, culminating in this, the twenty-eighth publication, which outlines and summarizes in a final report the entire work of the Committee.

On a basis of the findings outlined and reported in this volume the Committee has presented a series of recommendations endorsed by the majority group of the Committee, and a second group of recommendations endorsed by the minority group.

Chapter I outlines the present situation and states the nature of the problem. In very brief compass, it gives the highlights from the Committee's twenty-six fact-finding studies. It reports that 177,000 physicians and dentists with some 900,000 others at an annual expense of \$3,647,000,000 so distribute their services that those in the lower income group, while suffering as much or more sickness, receive far less medical service than those with greater income. Of the

We believe that this final report of the Committee on the Costs of Medical Care is of tremendous importance and should receive careful consideration by every physician, since it places in jeopardy independent practice. We believe that the conclusions drawn in the report of the Committee (Majority Report) are fallacious and contrary to both the best interests of the general public and also the medical fraternity. Because of the immediate interest which has been and will be created by this report, particularly upon organized industry, we have contemplated a discussion of the report in three successive issues of the Journal. This, the first of the series, attempts to epitomize the report, presenting this resume' without critical discussion. The second installment, which will appear in the January Journal, will attempt to analyze critically the majority report, while the third installment, to be printed in February, will critically discuss the minority report of the Committee.

—The Editor.

\$3,647,000,000 spent annually for medical service \$125,000,000 is spent for the services of osteopaths, chiropractors, naturopaths and allied groups and faith healers, and \$360,000,000 for "patent medicines." They conclude, "much of the former sum and practically all of the latter is wasted." "Possibly even greater sums are wasted through inferior services rendered by some licensed

physicians and dentists, and through the inadequate use of general hospitals and of the time and equipment of practitioners. In spite of these wastes, the total amount of national expenditure for medical service is, in the Committee's opinion, reasonable."

Regarding professional income the report states "physicians' incomes vary widely according to the size of the communities in which they practice. Forty-four per cent of the private practitioners, for example, practice in communities of 100,000 population or over, and their total incomes constitute 54 per cent of the total for all physicians." One-third of all private practitioners have a net income of less than \$2,500. For every physician with a professional net income of more than \$10,000 there are two who receive less than \$2,500. *Certainly no solution to the problem of medical cost can be reached through a reduction in the average of professional income.* [Italics in original.] Forty per cent of the gross income for physicians, which averages \$9,000, goes for professional expense, such as office rent, maintenance and replacement of equipment, et cetera.

Chapter II discusses the essentials of a satisfactory medical program. Six basic essentials are enumerated.

1. The plan must safeguard the quality of medical service and preserve the essential personal relationship between patient and physician.

2. It must provide for the future development of preventive and curative services in such kinds and amounts as will meet the needs of substantially all the people and not merely their present effective demands.

3. It must provide services on financial terms which the people can and will meet, without undue hardship, either through individual or collective resources.

4. There should be a full application of existing knowledge to the prevention of disease, so that all medical practice will be permeated with the concept of prevention. The program must include, therefore, not only medical care of the individual and the family, but also a well-organized and adequately supported public health program.*

5. The basic plan should include provisions for assisting and guiding patients in the selection of competent practitioners and suitable facilities for medical care.

6. Adequate and assured payment must be provided to the individuals and agencies which furnish the care.

In discussing these six essentials the Committee concludes that "medical care, by its very nature, is and must remain a distinctly personal service." "The family physician should be restored to his place of responsibility and trust and his potentialities extended by substituting coordinated for uncoordinated relations with specialists and other agencies which permit him to do his work effectively."

They conclude that "all practitioners should receive sufficient compensation and the conditions under which they work should be such as to make certain that high-grade men and women will continue to be attracted to these professions and will find it possible wholeheartedly to devote their time and attention to their professional work. The necessary money should come either from the individual patient directly or from some central fund to which he has contributed all or part of the amount needed for his care."

Chapter III sets up an ultimate objective in the organization of medicine. The key-note of

the concept of a satisfactory medical service for the nation is the development of one or more non-profit "community medical centers" in every city of approximately 15,000 population or more. In towns of 2,500 to 15,000 the Committee recommends the establishment of small hospital units operating as affiliated branches of a fully equipped center in the nearest city. For villages and distinctly rural areas, which contain 38 per cent of

the population, they recommend a series of "medical stations" which would be conveniently located. The cost of these proposed centers can be met by insurance paid for in full by the individuals or families served, or by the use of tax funds, or by a combination of insurance and taxation.

Chapter IV considers plans and experiments now under way, listing some twenty-five such experiments. Four of these are under professional sponsorship, four under consumer sponsorship, thirteen are listed as under community sponsorship with professional participation, one under joint sponsorship of professional and consumer groups, and three under commercial sponsorship.

The Committee concludes that: "These twenty-five types of development in the United States and the many developments abroad show a ferment at work in medical practice which contains great possibilities for good and evil. The Committee is aware of the fact that some of

the plans are mere attempts to capitalize for private gain the people's need for better medical service. It is equally aware of the dangers inherent in other plans. Each should be viewed as an experiment and subjected to the careful evaluation that is given in a scientific laboratory. Some of them appear to the Committee to be very promising."

RECOMMENDATIONS OF THE COMMITTEE

I

The Committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office, and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician.

II

The Committee recommends the extension of all basic public health services—whether provided by governmental or non-governmental agencies—so that they will be available to the entire population according to its needs. This extension requires primarily increased financial support for official health departments and full-time trained health officers and members of their staffs whose tenure is dependent only upon professional and administrative competence.

III

The Committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided, on an individual fee basis for those who prefer the present method. Cash benefits, i. e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services.

IV

The Committee recommends that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

V

The Committee makes the following recommendations in the field of professional education: (A) That the training of physicians give increasing emphasis to the teaching of health and the prevention of disease; that more effective efforts be made to provide trained health officers; that the social aspects of medical practice be given greater attention; that specialties be restricted to those specially qualified; and that postgraduate educational opportunities be increased; (B) that dental students be given a broader educational background; (C) that pharmaceutical education place more stress on the pharmacist's responsibilities and opportunities for public service; (D) that nursing education be thoroughly remodeled to provide well educated and well qualified registered nurses; (E) that less thoroughly trained but competent nursing aides and attendants be provided; (F) that adequate training for nurse-midwives be provided; and (G) that opportunities be offered for the systematic training of hospital and clinic administrators.

* The term "public health program" is meant to include the work of the official health departments and of voluntary health agencies.

Chapter V recites the recommendations of the Committee. The recommendations of both the majority and the minority are appended with this article.

Chapter VI gives the outlook for the future, the key-note of which may be summed up in the following excerpt:

"Whatever means may be employed the time has come for action. European countries may not have proceeded with the greatest wisdom, but they have acted. Most of them have developed organized systems of medical care. We, in the United States, above all other countries, are now in a position to go forward intelligently. With European experience available, and with the results of the five year program of study carried on by this Committee and collaborating agencies, a body of data is at hand which will enable each community and each state to take wise and adequate action.

"Delay can no longer be tolerated. The death rates from cancer, diabetes, and appendicitis are rising threateningly. More babies are dying each year, many of them needlessly, than there were American soldiers killed in the World War. Every year tuberculosis kills its thousands and costs the country more than half a billion dollars. By early application of our knowledge we could double the cured cases of cancer. The venereal diseases still attack the young, destroy fertility, deform babies, and wreck homes. A great army of rheumatics remains untreated without hope of alleviation or cure. Many diabetics still remain without insulin or receive it too late. Human life in the United States is being wasted, as recklessly, as surely, in times of peace as in times of war. Thousands of people are sick and dying daily in this country because the knowledge and facilities that we have are inadequately applied. We must promptly put this knowledge and these facilities to work."

MINORITY REPORT

Two minority reports and two papers constitute the views of those members of the Committee who found themselves in conflict with the general tone or trend of the majority report. In the first minority report exception is taken to the recommendation of the major report having to do with the establishment of community medical centers. Their objections to this plan are summarized as follows:

1. It would establish a medical hierarchy in every community to dictate who might practice medicine there.

2. It would be impossible to prevent competition among the many such centers necessary for large cities. Cost would inevitably be increased by the organization necessary to assign patients to the various centers. This would add to the evils of medical dictatorship, those of a new bureau in the local government with its attendant cost.

3. Continuous personal relationship of physician and patient would be difficult if not impossible under such conditions.

Regarding private group clinics the minority report states "That the establishment of such clinics is in line of progress when they are a natural outgrowth of local conditions."

Concerning the insurance system and the so-called "contract practice" the minority report states

"In the United States contract practice is essentially health insurance, and has already given rise to destructive competition among professional groups—inferior medical service, loss of personal relationship of patient and physician, and demoralization of the profession."

The majority report registers approval of insurance, but disapproves of insurance companies. The minority group agrees with the principle of that, and in any contract practice plan involving an insurance principle this principle should be applied to a non-profit organization.

RECOMMENDATIONS OF THE MINORITY GROUP

I

The minority recommends that government competition in the practice of medicine be discontinued and that its activities be restricted (A) to the care of the indigent and of those patients with diseases which can be cared for only in governmental institutions; (B) to the promotion of public health; (C) to the support of the medical departments of the Army and Navy, Coast and Geodetic Survey, and other government services which cannot because of their nature or location be served by the general medical profession; and (D) to the care of veterans suffering from bona fide service-connected disabilities and diseases, except in the case of tuberculosis and nervous and mental disease.

II

The minority recommends that government care of the indigent be expanded with the ultimate object of relieving the medical profession of this burden.

III

The minority joins with the Committee in recommending that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

IV

The minority recommends that united attempts be made to restore the general practitioner to the central place in medical practice.

V

The minority recommends that the corporate practice of medicine, financed through intermediary agencies be vigorously and persistently opposed as being economically wasteful, inimical to a continued and sustained high quality of medical care, or unfair exploitation of the medical profession.

VI

The minority recommends that methods be given careful trial which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice.

VII

The minority recommends the development by state or county medical societies of plans for medical care.

DEAN HOUGHTON LEAVES IOWA

Dr. Henry S. Houghton, since 1928 Dean of the University of Iowa College of Medicine, Iowa City, has been appointed Associate Dean of the Division of Biological Sciences, University of Chicago, and Director of the University Clinic. He will assume his new duties after January 1st, but we are glad to learn from him that the transition will be gradual, and that his family will remain in Iowa City throughout the school year.

Dr. Houghton was Dean of the Harvard Medical School of China, Shanghai, 1911 to 1917; Acting Director of the Peiping Union Medical College, 1918 to 1921, and Director 1921 to 1928. As Director of the Clinic, Dr. Houghton will succeed Dr. Franklin C. McLean, who will become a professor of physiology in accordance with his desire to return to scientific research.

During the four years of his residence in Iowa, Dr. Houghton has created a host of friends and admirers through his many personal contacts with his colleagues. In a more impersonal way he is admired and respected by hosts of alumni and friends of the University for his outstanding contributions to medical education within the state. During his administration the Medical School has grown both in numbers and in buildings, and has rendered a more lasting service to the state, perhaps, than in any like period of its existence. A most fruitful form of service has been rendered through the many medical clinics established and sponsored by Dean Houghton. Postgraduate medical education has been brought to scores of physicians, not only through their attendance at courses of instruction given in Iowa City, but also through their attendance at the extension lecture courses given by University faculty members at central points throughout the state. His thoughtful counsel and hearty cooperation with organized medicine in Iowa, as represented by the Iowa State Medical Society, was unstintingly given in every project proposed by this organization.

We congratulate Dr. Houghton in his new appointment, but regret that he must leave Iowa to assume his new duties.

A NEW HEALTH PUBLICATION

The Health Organization of the League of Nations has already been in existence for ten years. Up to the present time those who wished to follow the work of this organization have been obliged to consult various documents such as the records of international conferences, the minutes of committees, reports by experts, annual reports, et cetera. In order to make this material more

accessible and, consequently, more widely known, it was decided to embody in a quarterly bulletin, published simultaneously in English and French, the various transactions and reports of this health organization. This quarterly bulletin is not, however, an official organ, and the various papers reported do not necessarily reflect an official attitude.

The first number of the first volume of the quarterly bulletin appeared in March of 1932, and has been followed in June and September by subsequent numbers. The sponsorship of the bulletin bespeaks its high character. A careful review of the first three numbers indicates that this journal is not only authoritative, but because of the generous collaboration in the preparation of the articles, accurately reflects a worldwide attitude upon the many problems affecting public health.

The American representative of this bulletin is the World Peace Foundation, 40 Mt. Vernon Street, Boston, Massachusetts.

THE OPEN FORUM

It has been my good fortune to be present at a number of the district meetings sponsored by the Council of the State Society.

I have come to believe that these meetings are heading in the right direction. Not only are good, practical scientific programs given, but incorporated in them we find much information given that comes directly from the main office, giving the members an up-to-date insight into the general management and policies of the State Medical Society. This is significant. It more clearly sets forth our ideals and keeps afresh any changes that take place or are anticipated in the state organization.

I have also observed that nearly all papers or clinical reports are given by local members of the district in which the meeting is held.

The programs are of a practical nature and the discussions are timely and high class in every way. And why should they not be? We have in each district many good men who are capable of constructive work. How can they be developed? The district meeting is the answer. These men belong to it. They are able and should be responsible for the meetings. Many young men are entering the practice of medicine. The district meeting is the forum in which they may develop and thus help to cement a true loyalty among all the members of our Medical Society throughout the State.

W. E. Long, M.D.

SPEAKERS BUREAU ACTIVITIES

MEETING OF MERIT

November, 1932

It is the plan of the Speakers Bureau to publish from time to time the report of the outstanding medical society meeting of that month. Many points may be taken into consideration in judging "the meeting of merit of the month"—originality of program, type of program, percentage of members present, and other features which tend to build up an active medical society and contribute to the development of the medical profession. Secretaries are urged to send in reports of their medical meetings and include these little details which may win distinction for one of their meetings.

The "meeting of merit" for November was the meeting of the second district of the Iowa State Medical Society at Mason City on November 15, a detailed report of which is printed under Society Proceedings. The distinctive feature of this meeting was the use of local men for the program. Three of the four speakers were local doctors of the district and the other speaker was from the State University. This plan is in definite contrast to the growing practice of using outside talent, often from outside the state, for any medical meetings larger than a single county medical society meeting. Many counties, even, use men from outside their locality on all or most of their programs, thinking it enhances the interest. The enthusiasm manifested in the program of the second district meeting refutes this idea. This plan of a local talent program is making a real contribution to medical progress in Iowa; it is developing medical leaders in our own state, from among our own members.

The Speakers Bureau heartily commends programs of this type and hopes they will become increasingly prevalent in Iowa.

POSTGRADUATE WORK

This month sees the completion of the fall postgraduate courses sponsored by the Speakers Bureau. In spite of the scarcity of funds this year, it has been encouraging to note the number of doctors enrolled in the courses. They realize that present conditions present an excellent opportunity to take advantage of spare minutes to better themselves professionally.

The postgraduate courses given by the faculty members of the College of Medicine of the State University are being offered in three centers—Washington, Monticello and West Union. There are eighteen physicians enrolled for the work at Washington, forty-seven at Monticello and thirty-five at West Union. They have been taking a combined course on obstet-

rics and pediatrics and one on surgery for the general practitioner.

The course on "Fundamentals of Medicine" which is being given in Des Moines has been conducted by men of national prominence from various sections of the United States. There have been about sixty men taking at least part of this course.

This marks the fourth consecutive year that the State University College of Medicine has cooperated with the State Medical Society in bringing to its members the advantage of advanced medical study without their having to leave their practices. This plan of extension postgraduate work is almost entirely Iowa's own. Universities in other states conduct postgraduate courses of a week or three days. Wisconsin offers a ten weeks' course similar to those offered in Iowa, but in no other place is this type of work offered so extensively. It is a high tribute to the work of the faculty members of our College of Medicine and to the interest of the members of the Iowa State Medical Society in professional improvement that even in a year of severe depression such a project can be carried through successfully.

RADIO TALKS

WOI—Fridays, 4:00 p. m.

WSUI—Thursdays, 8:00 p. m.

December 2—Diabetes.

December 9—Sinus Trouble.

December 16—Trench Mouth.

December 23—The Sore Throat Danger Signal.

December 30—The Cost of Being Sick.

January 6—Vitamins.

COLLEGE PROGRAMS

Drake University has set aside ten chapel periods, two series of five periods each, for health talks to the Drake students by members of the Iowa State Medical Society. This is the first contact the Speakers Bureau has made with college groups and it is hoped that we will be able to extend this plan to other colleges in the state. The following talks are to be presented in the first series:

December 8—Romances in Medicine, Walter L. Bierring, Des Moines.

December 15—Simple Rules of Health, Channing G. Smith, M.D., Granger.

December 22—Cancer, E. M. Myers, M.D., Boone.

January 5—Insurance Which Actually Insures, M. E. Barnes, M.D., University of Iowa.

January 19—Periodic Health Examinations, A. A. Schultz, M.D., Ft. Dodge.

THE CHRISTMAS SEAL SALE



FIFTY million penny Christmas seals distributed by the Iowa Tuberculosis Association are being offered for sale by local health associations during this, the Twenty-sixth Annual Christmas Seal Sale.

Christmas seal chairmen throughout the state are making a special effort to increase the seal sale this year because facts from visiting nurse associations, health centers, hospitals and other health institutions have proved that additional burdens are being placed on health agencies and that the need for maintaining standards of health protection and nutrition are greater in times of stress. Federal and state aid relief will be conditioned upon the community doing its utmost in health work which is a necessary part of any adequate relief plan.

The proceeds of the seal sale will be used by local associations in the aid of families affected by sickness, in child health work, nutrition, furnishing of milk, school health inspection, dental inspection, public health nursing, fresh air camps, clinics, health education, school health supplies such as first aid kits, thermometers, etc. The state association uses its share of the funds in educational work for the prevention of tuberculosis, heart disease and other major causes of illness, for the promotion of health legislation, for stimulation of local health work, for health education projects and for the publication and distribution of literature and other publicity materials.

Dr. John H. Peck, president of the National Tuberculosis Association, in the following letter to Iowa Health workers outlines some of the needs in health protection for which the seal sale is employed:

Dear Fellow-worker:

Remember the watchword of Verdun, "They shall not pass."

Our job as Christmas seal workers is to hold the line in this, the third year of the war on depression. Information furnished me from all parts of America through our national headquarters and from abroad is that the incidence of tuberculosis in certain age groups is showing an increase. This is not yet reflected in death rate statistics because tuberculosis is a slow disease, there being an

average span of at least three years between the observed beginning of the illness and death. Germany, in the early days of the war, did not show a high disease death rate, but later and in the post-war period the tuberculosis and other death rates shot up like a rocket.

I venture to prophesy that in 1935 we will have the biggest seal sale in our history, due to the effects of the present economic stress, which carries with it lowered resistance, worry and undernourishment. But that will be too late to prevent the damage. We must hold the line *this year*! We must try to sell more seals than ever before. There is greater need for funds for the fight against tuberculosis and to give relief to those who cannot otherwise secure proper medical and dental care and even the necessary food to maintain health.

The war on depression is as real and urgent as the war on the enemies of 1917. You are holding the front line. Although this war does not supply the fervor of the fight or the ecstasy of a great enthusiasm, it does call for great and humanitarian courage; it has its steady and constant inspirations; its necessity for self-sacrifice and its nobility of service.

A great president once said, "Humanity marches forward on the feet of little children." Therefore let us remember that our communities march forward to their destiny of material well-being and spiritual victory to become healthy and wholesome places for our children to live, only through our utmost efforts to safeguard the health of the children today. They are more than business and barter or structures and streets, for they constitute our communities of tomorrow.

Already the infant mortality rate in Des Moines has increased and reports from clinics about the state of Iowa show an increase in tuberculosis. We must hold the line! We must ask those who have jobs or savings to buy more seals for the sake of the health of those who lack the means to protect themselves. It is of but little purpose to feed a child in 1932 and then let him die of a preventable disease in 1935.

With best wishes for a successful seal sale this year, Most sincerely yours,

JOHN H. PECK, M.D., President,
National Tuberculosis Association.

SOCIETY PROCEEDINGS

Boone-Story Society

The Boone-Story Medical Society met Thursday, November 17, in Ames, with a dinner at the Hotel Sheldon-Munn, after which the following program was presided over by Dr. Earl B. Bush, president of the Story County Medical Society: Colles Fracture, W. H. Longworth, M.D., of Boone; Unusual Fractures, A. B. Deering, M.D., of Boone, and Fractures of the Hip, W. B. Armstrong, M.D., of Ames.

Buena Vista County

The regular meeting of the Buena Vista County Medical Society was held at the Bradford Hotel in Storm Lake, Monday, November 28. Dr. W. W. Bowen of Fort Dodge, president of the State Society, was present and led in discussions.

Carroll County

Homer W. Scott, M.D., of Fort Dodge, presented the scientific program for the Carroll County Medical Society, when that organization met Thursday, November 3, at St. Anthony's Hospital in Carroll. Following the lecture there was a general discussion. Dr. Scott's subject was Renal Tuberculosis.

Clinton County

The Clinton County Medical Society held its regular meeting at the LaFayette Hotel in Clinton, Thursday, November 17. Following a repast featuring steak and mushrooms, the society was favored with a paper on Functional Diseases of the Heart, by Fred M. Smith, M.D., of Iowa City, and Rheumatic Heart Diseases, by C. W. Baldrige, M.D., also of Iowa City. Both papers were well received and the discussion following the presentation was one of the best of the year.

Ralph F. Luse, M.D., Secretary.

Crawford County

Tuesday evening, November 22, the Crawford County Medical Society held its third meeting of the fall in the dining room of the Hotel Denison at Denison. Immediately after the six-thirty dinner, the following program was presented: Transurethral Prostatic Resection, Nathaniel G. Alcock, M.D., of Iowa City; Urinary Antisepsis, Edwin Davis, M.D., professor of urology, University of Nebraska School of Medicine, Omaha; Pyelitis—Diagnosis and Modes of Treatment, J. James Duffy, M.D., Denison.

J. James Duffy, M.D., Secretary.

Des Moines County

Forty physicians from Burlington and surrounding counties attended the open meeting of the Des Moines County Medical Society held in Burlington, Tuesday, November 8. Four physicians from the University of Iowa College of Medicine, presented the following

scientific program: Diagnosis of Heart Diseases, Horace M. Korn, M.D.; Diagnosis and Treatment of Anemias, C. W. Baldrige, M.D.; Treatment of Diabetes, R. B. Gibson, M.D.; Certain Features and Treatment of Heart Diseases, Fred M. Smith, M.D.

Hardin County Annual Meeting

The following officers were elected by the Hardin County Medical Society at its annual meeting held in Eldora, Tuesday, November 15: Dr. D. M. Nyquist of Eldora, president; Dr. L. E. Fraser of Iowa Falls, vice president; and Dr. W. E. Marsh of Eldora, secretary.

Johnson County

The Johnson County Medical Society held its November meeting at Oakdale, Iowa, as guests of the State Board of Control and the staff at Oakdale. One hundred and five members and guests were present. The paper of the evening was given by John H. Peck, M.D., of Des Moines, on the After-Care of the Tuberculous. Before taking up the after-care of the tuberculous, Dr. Peck pointed out the incidence of tuberculosis, the death rate resulting from tuberculosis, with particular emphasis upon the percentage of deaths occurring in young adults, and also upon the great number of young adults incapacitated in the State of Iowa. He emphasized the point that although much progress had been made in the treatment of tuberculosis and in diminishing the death rate from tuberculosis, yet much more could be done by an earlier diagnosis by the general practitioner. He expressed the hope that in the near future the facilities of the Oakdale sanatorium for tuberculosis might be made available to and utilized by the College of Medicine for a more extensive program of teaching the symptomatology, diagnosis, and treatment of this all too prevalent condition. The situation here so far as the material relationship is concerned is unique; a sanatorium maintained by the state within five miles of the state-maintained medical school.

Geo. C. Albright, M.D., Secretary.

Keokuk County

The regular monthly meeting of the Keokuk County Medical Society was held Tuesday, November 15, at the offices of the Drs. Dulin in Sigourney. Following a six-thirty dinner, at which wives of the members were guests, the scientific program was presented. Frank O. Pershing, M.D., of Keota, read a paper on Head Injuries, and Roy G. Swinney, M.D., of Richland, discussed Gall-Stones.

W. W. Stirlen, M.D., Secretary.

Linn County

Thursday, November 10, Adolph Sachs, M.D., professor of medicine at Creighton University, pre-

sented a paper on Agranulocytic Angina before an audience of about a hundred and thirty members and guests of the Linn County Medical Society. His paper was ably discussed by Drs. Baldridge, Rohner and Hansmann of Iowa City, Dr. Rohlf of Waterloo, and Dr. Riggert of Clinton.

The December meeting of the society will be held Thursday, the eighth, at the Hotel Montrose, and George W. Crile, M.D., of Cleveland, will deliver an address on A New Conception of and a New Treatment for Neurocirculatory Asthenia and Peptic Ulcer.

On January 12, Joseph Baer, M.D., of Chicago, will be the guest speaker on The Cervix During Labor and Post Partum.

T. F. Hersch, M.D., Secretary.

Louisa County Annual Meeting

The Louisa County Medical Society met in Oakville, Thursday, November 10, for the regular annual meeting. After a roast duck dinner, a business session was held at which the following men were elected officers of the society for the coming year: Dr. T. L. Eland of Letts, president; Dr. S. J. Lewis of Columbus Junction, vice president; Dr. E. R. King of Letts, secretary and treasurer. A scientific paper on Acute Mastoiditis, illustrated with lantern slides, was presented by Daniel F. Huston, M.D., of Burlington. Visitors at the meeting included: Drs. Boice and Stewart of Washington, Drs. Ditto and Huston of Burlington, and Drs. Beveridge, Howe, Phillips and Fulliam of Muscatine.

E. R. King, M.D., Secretary.

Madison County

The regular monthly meeting of the Madison County Medical Society was held at the Winterset Hospital, Monday, November 14. After a turkey dinner served in the dining room of the hospital, Dr. Arnold L. Nelson presented John H. Randall, M.D., associate professor of obstetrics and gynecology at the University of Iowa College of Medicine, who gave an interesting talk, supplemented by lantern slides, on Uterine Bleeding at all Ages. Granville N. Ryan, M.D., of Des Moines, read an interesting report of a case of Anemia in Pregnancy.

C. B. Hickenlooper, M.D., Secretary.

Marion County

The Marion County Veterinary Medical Society and the Marion County Medical Society held a joint meeting at the Masonic Hall in Knoxville, Wednesday, November 16. After a six-thirty dinner, a symposium on Diseases and Parasites of Animals Transmissible to Man, was presented with the following speakers: F. M. Roberts, M.D., of Knoxville; H. C. Payne, M.D., of Pella; A. H. Quin, D.V.M., of Des Moines, and B. A. Benbrook, D.V.M., of Ames.

C. S. Cornell, M.D., Secretary.

Marshall County

Members of the Marshall County Medical Society heard Frederick Mulsow, M.D., of Cedar Rapids, speak on The Uses and Abuses of the Clinical Labor-

atory, Tuesday, November 1, at the regular monthly dinner meeting of the society in Marshalltown. Dr. Mulsow brought a large number of appendix specimens with him and used them to illustrate various points in his talk.

Palo Alto County

The Palo Alto County Medical Society, cooperating with the Iowa Tuberculosis Association and the Iowa Heart Association, held a clinic in the high school at Emmetsburg, Friday, November 18. Drs. John H. Peck and Daniel J. Glomset of Des Moines were the clinicians in charge. Following the afternoon session, a dinner was served at the Hotel Kermooore, after which Dr. Glomset presented an illustrated paper on Pathology of Rheumatism. Dr. Peck then gave an interesting account of his trip to Europe this summer, during which he attended a meeting of the International Tuberculosis Association, representing the United States, as president-elect of the National Tuberculosis Association. Visitors from outside the county included Drs. Colleston and Sokol of Spencer, Dr. Kirkegaard of Ringsted, and Dr. Knipe of Armstrong. Members of the Palo Alto County Medical Society all agree that these chest clinics are eminently worth while.

Harold L. Brereton, M.D., Secretary.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held Tuesday, November 29, at the Fort Des Moines Hotel with one hundred and forty members and guests present. The scientific program consisted of two papers. John W. Bailey, M.D., presented an illustrated lecture on Skin Diseases, which was discussed by J. Frank Auner, M.D., and Erwin Schenk, M.D. Ralph H. Parker, M.D., read an original paper on the Treatment of Acute Mastoiditis, illustrated with pen sketch slides. This paper was discussed by William W. Pearson, M.D., George A. May, M.D., and Ellis G. Linn, M.D. An added feature of the meeting was the showing of motion picture slides of a European journey, by W. Eugene Wolcott, M.D. Following adjournment of the meeting, many members remained to participate in the fellowship of the social hour.

E. M. Kingery, Executive Secretary.

Scott County Annual Meeting

The annual election of the Scott County Medical Society held November 1 in Davenport, resulted in Dr. Sidney G. Hands being elected president; Dr. Frederick H. Lamb, vice president; Dr. H. A. Meyers, secretary, and Dr. L. A. Block, treasurer.

Woodbury County

Tuesday, November 15, members of the Woodbury County Medical Society met at the Martin Hotel Ball Room, for the regular dinner meeting. After the dinner, the following papers were presented: Sex Differentiation, A. G. Pohlman, M.D., Dean of the Medical School, University of South Dakota, Vermil-

ion; A Case Report, Roy E. Crowder, M.D., Sioux City, and Hypertension, Mark Wheelock, M.D., Sioux City.

Robert H. McBride, M.D., Secretary.

Northwest Iowa Medical Association

The regular fall meeting of the Northwest Iowa Medical Association was held Thursday, October 27, at the Arlington Hotel in Sheldon. The program was as follows: Unusual and Interesting Case Reports, J. W. Myers, M.D., of Sheldon; A General Discussion of Syphilis from the Practitioner's Standpoint, Paul A. O'Leary, M.D., of Rochester; and Syphilis as It Affects the Heart, Harry L. Smith, M.D., also of Rochester.

Second District Meeting

The Second District of the Iowa State Medical Society met at Mason City on November 15 in conjunction with the regular meeting of the Cerro Gordo County Medical Society. There were 53 doctors from seven of the nine counties of the district present at the 6:30 dinner for which a charge of fifty cents was made.

This is one of the first of the district meetings which are being sponsored by the Council and worked up by the Speakers Bureau. The purpose of these meetings is to develop doctors practicing in the district by using them on the program. At this meeting three local doctors gave papers and there was one outside speaker. M. B. Call, M.D., of Greene, gave a very excellent paper on Sacro-Iliac Strain. George H. Steele, M.D., of Belmond, presented a well developed talk on Amenorrhea with a very good discussion of endocrine therapy. John Kenefick, M.D., of Algonia, gave a most interesting report on Spontaneous Pneumothorax. W. H. Gibbon, M.D., of the College of Medicine of the State University, was the outside speaker and gave a lantern slide demonstration of Bone Tumors. There was some discussion of the work of the State Society by the councilor of the district.

The papers were very well received. The discussion by the other doctors was very pertinent and indicated unusual interest in the program. The object of the officers of the State Society and the Speakers Bureau is to develop medical leaders in these district meetings by calling on the many talented local men who have heretofore done very little in the way of preparing medical papers for such meetings.

The doctors in the second district are enthusiastic about the interest and value of these district meetings and plan to have four meetings during the year.

L. R. Woodward, M.D.,
Councilor Second District.

Tri-County Medical Association

The Tri-County Medical Association, composed of members from Henry, Jefferson and Washington County Medical Societies, met in Fairfield, Friday, November 18, for the regular quarterly meeting. The program for the evening consisted of a paper on Hypothyroidism, by Myron G. Means, M.D., of Ot-

tumwa; and an address on Blood Pictures and Certain Related Clinical Implications, by Frederick H. Lamb, M.D., of Davenport. Annual election of officers resulted as follows: Dr. W. A. Sternberg of Mt. Pleasant, president; Dr. H. F. Masson of Washington, vice president; and Dr. J. W. Laird of Mt. Pleasant, secretary.

AUXILIARY NEWS

Muscatine County

An afternoon tea was given at the Hershey Nurses Home in Muscatine, Monday, October 17, by the Woman's Auxiliary to the Muscatine County Medical Society. Guests included wives and widows of physicians, and alumnae of both the Bellevue and Hershey Hospitals. Miss Alma Harts of the State Department of Health, presented an address, taking for her subject, Maternal and Child Hygiene.

Pottawattamie County

The November luncheon of the Doctors' Wives Club was held Monday, November 14, at the Hotel Chieftain in Council Bluffs. The hours after luncheon were spent sewing for the Red Cross. Assisting Mrs. L. G. Howard, chairman of the committee, were Mrs. M. A. Tinley and Mrs. J. M. Barstow.

INTERESTING NEWS

In Brief

County medical societies in Detroit and Milwaukee have taken definite action advising members against placing cards in directories of any kind or listing their names in directories in bold face type or in any manner setting their names out in preference to the usual custom of the profession. Such action is considered unethical and is an added expense to the doctor who employs such means of publicity.

Alert to the tendency of the times, the American Medical Association, through its Committee on Medical Economics, has just completed a study of the existing schemes for furnishing medical treatment to the poor, to special classes and to industries, attempting in each case to evaluate the proposal with all fairness, pointing out the inherent weakness or strength of the program. This report appearing in the Bulletin of the American Medical Association should be read by every physician.

Dr. Edward C. Rosenow, pioneer research bacteriologist at the Mayo Clinic, has recently announced that the organisms of infantile paralysis, influenza, and the common cold may be readily recognized and differentiated by their activity when placed in an electromagnetic field. The several streptococci have been proved to possess very different electrical charges, which renders their diagnosis more certain, and more quickly accomplished.

Based upon the belief that the present period of depression means a restriction of necessary foods,

the limitation of warm clothing, and the curtailment of early medical treatment of acute conditions, Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, states that we must expect during the next five years a sharp increase in deaths from degenerative conditions, diseases of malnutrition and tuberculosis.

The title of Knight Commander of the Crown of Italy was conferred upon Dr. William J. Mayo and Dr. Charles H. Mayo, October 22, by his majesty, the King of Italy, "in recognition of their services to science and to humanity; and more especially in recognition of their kindness to the Italian graduate students studying at the clinic and to the patients of Italian origin who are cared for in the clinic."

The tuberculosis and health society of Detroit and Wayne counties, Michigan, has examined for tuberculosis more than 3,500 school children between the ages of five and nineteen years, over a period of two and a half years. Of this number 24.5 per cent gave a positive von Pirquet test. Of those students who react positively 5.5 per cent were diagnosed as tuberculous by the x-ray.

The Rawlins strain of typhoid bacilli, long used by bacteriologists in the preparation of preventive vaccines, has recently been shown to have undergone deterioration, and to have produced a much more inferior vaccine than more recently isolated strains to which it has been compared.

To succeed Dr. William E. Welch, "Dean of American Medicine," as head of the Johns Hopkins University Institute of the History of Medicine, Dr. Henry E. Siegerist has been chosen from a similar chair in the University of Leipzig, Germany.

Indicative of the trend of the times, the program of the recent annual conference of state secretaries and editors was largely given over to a discussion of the various forms of contract practice and innovation in the practice of medicine.

The 1932 Nobel prize in medicine and physiology has been awarded jointly to Sir Charles Scott Sherrington of Oxford University, and Prof. Edgar Douglass Adrian of Cambridge University, for researches upon nerve activity.

The Roosevelt medal, awarded by the Roosevelt Memorial Association, has been presented this year to Dr. Robert A. Millikan, director of the Norman Bridge Laboratory of Physics.

The Bureau of Health of the city of St. Paul has since May of 1928 vaccinated for smallpox by the pressure method exclusively. Shields and dressings are discarded entirely and arm infections do not occur.

Dr. Harvey Cushing, pioneer brain surgeon of

America, retired as Mosley professor of surgery at Harvard Medical School at the beginning of the fall semester this year.

The November issue of the *Journal-Lancet* has been published as a special obstetric number under the editorship of Dr. Jennings C. Litzenberg.

In the recent campaign to give unemployment relief in Council Bluffs, the Council Bluffs Medical Society contributed \$500.

During the month of October 952 persons received free treatment at the clinic of the Rose Cross Medical and Surgical Society, Sioux City.

The George Donohoe cottage at the State Hospital at Cherokee, a memorial and tribute to Dr. George Donohoe, former superintendent of the hospital, was dedicated on October 12.

A gain of 40 per cent over 1931 was registered in the Nurses' school freshman class at the University of Iowa this year.

A hospital under the management of Dr. G. F. Dolmage has been opened in Buffalo Center during the last few weeks.

PERSONAL MENTION

Dr. Frederick W. Mulsow of Cedar Rapids, spoke before the Cedar Falls Rotary Club, November 16, on the subject, "Facts and Fiction of the Ductless Glands."

Dr. W. C. Egloff, entering upon the practice of medicine in Mason City, is the third generation of the Egloff family to choose that town as the locality in which to practice medicine, his father and grandfather having located there before him. Dr. Egloff is a graduate of Rush Medical College, Chicago, and served his internship in Chicago. Later he became associated with the Peter Bent Brigham Hospital in Boston as a research fellow in medicine, and for three years was an instructor in medicine at Harvard University.

Dr. James C. Hill of Newton, addressed the local Kiwanis Club, Wednesday, November 16, taking as his subject, "Colds and Their Prevention."

Dr. Tom B. Throckmorton of Des Moines, was honored at the recent meeting of the Interstate Postgraduate Medical Association, by being named to the office of secretary of that organization.

Dr. Robert H. McBride, Sioux City pediatrician, spoke at the first meeting of the season of the Health Education Class of the Sioux City Woman's Club, October 25. His subject was "Baby Clinics—A Community Asset."

Dr. Peter A. Bendixen of Davenport, was awarded first prize for delivering the best paper in a nationwide contest at the convention of the American Association of Railway Surgeons in Chicago, November 2-4. Dr. Bendixen's paper was entitled, "Fractures of the Elbow."

Dr. Ernest E. Shaw of Indianola, addressed the Southwest Iowa Parent-Teacher's Association, at a meeting held in Bedford, October 17. His subject was, "High Standards in Health a Safeguard Through Childhood."

Dr. Thomas McMahon of Garner, was elected president of the Garner Lions Club at the annual meeting of that organization held November 16.

Dr. Prince E. Sawyer of Sioux City, was named second vice president of the American Association of Railway Surgeons at the recent meeting held in Chicago.

Dr. Granville N. Ryan of Des Moines, discussed "The Relation of Preventive Medicine and Dentistry to Business Economics," before the G. V. Black Dental Club, October 17.

Dr. O. F. Parish of Grinnell, was recently elected president of the local Kiwanis Club.

Dr. John T. Hanna of Burlington, addressed the annual meeting of southeastern Iowa druggists in Burlington, October 19, on "The Relationship of the Physician and the Pharmacist."

Dr. H. H. Moore of Ottumwa and Dr. Arnold L. Jensen of Council Bluffs, were among the newly elected fellows of the American College of Surgeons at the annual convention of that body held in St. Louis.

Dr. H. P. Lee of Iowa City, attended the annual meeting of the north central branch of the American Urological Association, held in Ann Arbor, Michigan, October 27, 28, and 29. Dr. Lee presented a paper before the group on "Problems of Urology."

MARRIAGES

Tuesday, November 8, the wedding of Miss Mary Lamkin of Waterloo, and Dr. Edward H. Thielen, son of Dr. M. H. Thielen of Grundy Center, took place in Waterloo. After a short wedding trip to Chicago and Kalamazoo, Michigan, Dr. and Mrs. Thielen will be at home in Waterloo, where Dr. Thielen has been practicing medicine for the past two years.

The marriage ceremony of Miss Ruth Anderson and Dr. A. Keith Droz, both of Washington, was performed Wednesday, November 16, at the home of Mr. and Mrs. Robert Patterson, in Washington. Dr. Droz is a recent graduate of the State University College of Medicine, and practiced for a short time in Cedar Rapids. He is now located in Washington,

where the young couple will make their home, after a two weeks' motor trip to Chicago and the eastern states.

DEATH NOTICES

Alden, Frederick, of Des Moines, aged fifty-five, died November 18 as the result of a sudden heart attack. He was graduated in 1906 from State University of Iowa College of Homeopathic Medicine, and at the time of his death was a member of the Polk County Medical Society.

Harned, Calvin Waldo, of Des Moines, aged fifty-three, died November 18, as the result of a sudden heart attack. He was graduated in 1906 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Polk County Medical Society.

Lanpher, Howard Arthur, of Des Moines, aged forty-nine, died November 7, after a two weeks' illness from pneumonia. He was graduated in 1907 from Tufts College Medical School, Boston, and at the time of his death was a member of the Polk County Medical Society.

Nelson, Carl David, of Persia, died November 14, in an Omaha hospital where he had been taken following a stroke. Death was caused by a fractured skull resulting from a fall when he was seized by the stroke. Dr. Nelson was graduated in 1909 from the University of Nebraska College of Medicine and had long been a member of the Harrison County Medical Society.

Rhonalt, Anthon Anderson, aged forty-six, who formerly practiced medicine in Iowa at Waterloo, Hampton and Coulter, died October 29 in Eugene, Oregon, after an illness of nearly two years. He was graduated in 1915 from Creighton University School of Medicine, and had been a member of the Black Hawk County Medical Society.

Ward, Everett Chapman, of Brandon, aged fifty-six, died November 18 of complications following heart disease. He was graduated in 1907 from the State University of Iowa College of Medicine and at the time of his death was a member of the Buchanan County Medical Society.

NO ADVERTISING OVER BRITISH RADIO

There is absolutely no advertising of any kind carried on over the British Broadcasting Company stations in England. Advertising does not play any part in the broadcasts and the stations are on the air as a means of serving the public with good programs. The British Broadcasting Company receives half of the license fees and in this way it is able to cover expenses and carry on as a public service. The license fee in England is ten shillings, about \$2.50, paid by the owner of a radio.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City

DR. FRANK M. FULLER, Keokuk

DR. JOHN T. McCLINTOCK, Iowa City

DR. ARTHUR D. WOODS, State Center

DR. WALTER L. BIERRING, Des Moines

Rheumatic Carditis—Autopsical Examination

First Article in the First Medical Journal Published in Iowa with
Comments After Eighty-two Years

THE

WESTERN

MEDICO-CHIRURGICAL JOURNAL

VOL. 1.

KEOKUK, IOWA, SEPTEMBER 1, 1850.

NO. 1.

ART. I. — **Rheumatic Carditis.** — *Autopsical Examination.*

By Jno. Forrest Dillon, M.D., Farmington, Iowa.

On Saturday, August 10th, 1850, I was entrusted by Dr. Grubb of this place to accompany him and Dr. Barton, to a small town, about five miles distant, (Croton,) to assist in the post-mortem examination of an individual, whose death had occurred under somewhat suspicious circumstances. On my arrival there, I found the public mind in the most sensitive condition.

The excitement was so considerable as to have occasioned an entire suspension of business—the farmer of the neighborhood had abruptly left his harvest—the blacksmith his anvil—the carpenter his saw—and the citizens were collected in groups, discoursing, as we might, *a priori*, have expected, in a manner infinitely more boisterous than scientific, concerning the case.

After allaying, as much as possible, the prevailing excitement, to which, as it strongly threatened to proceed to a criminal extent, we first directed our attention; by the institution of a scrutinizing examination, we found the history of the case to be as follows. It is not nearly so precise as I could have wished, but as the attendant physicians had neglected to chronicle his case in their books, it is as definite as I am able to present.

Samuel Reed, aet. 23, laborer, had been ailing more or less, for a considerable period of time, and with little or no appreciable advantage to his

health, had been under the professional charge of a goodly number of physicians. The exact time when Reed first complained of ill health, it is impossible, definitely to ascertain, let it suffice, however, to say, that on the 15th day of last November, owing to a sudden supervention of alarming symptoms, Dr. Grubb of that place was consulted, under whose management, they were greatly—but as the event proved—only temporarily ameliorated. He was seized, according to Dr. Grubb's statement, with every symptom characterizing a genuine apoplectic attack, an occurrence, at which, when I saw the condition of the central organ of circulation, I was equally unsurprised, either from theoretical reasoning, or from the recorded experience of others. When thus attacked, Reed, who at the time was walking in the fields, was carried home in a profoundly insensible state, and was immediately bled, *pleno rivo*, to a great extent from both arms simultaneously, and in two weeks, was so far restored as to be able to walk about, without any paralysis, or impairment of his intellectual functions. Dr. G. remarked that he suspected the causative agency of the heart in this attack, and warned the patient against a repetition. It is customary for persons laboring under chronic malady, of whatever nature, not very amenable to treatment, to consult every "new physician" who settles within their reach, consequently, upon the location of a Doctor Harlan, last Spring at Croton, Reed transferred himself to his charge.

From the general symptoms which were present, rather than from the institution of any physical exploration, Dr. H. diagnosticated his complaint to be an organic affection of the heart, and with commendable frankness, stated to the patient its hopeless and intractable nature—that it was wholly futile, as his disorder was entirely removed from

the domain of successful Therapia, to expect any permanent or radical benefit from medicine—in short, that it was one of those cases, in which the duty of a physician was extremely circumscribed, limited indeed to the palliation of distressing phenomena as they might arise. Enjoying variable degrees of health, vascillating from bad to worse, he continued under the management of Dr. H., until the arrival of one of those hybrid physicians, known under the names of Thompsonians, Beachites, Eclectics, &c. &c., with which our Western country is so disgracefully flooded, and who contribute more than any one cause, nay, more than all other causes combined, to depress the science of medicine amongst us. By means of vaunting his own praise, with the most complacent effrontery upon all occasions, he succeeded in a surprisingly short time, in rendering himself extensively notorious.

His boasted skill must, of course, be allowed a trial, and Reed consulted him. He affected to make a very *sage* (Hudibrastic) examination of the case, after which he most emphatically denied that Reed labored under any disease of the heart whatever, and in equally positive terms, communicated to him the encouraging intelligence that all *then* ailing him was, an inflammation of the stomach and intestines, which originated from, and was still perpetuated by, the use of mercury, but had not yet made such invasions upon his constitution, as to be able to resist long, the divinely efficacious, and omnipotently curative agency of lobelia! Reed, shortly subsequent to this time, grew suddenly worse, so much so, that he was obliged to keep his bed, and his physician commenced his course of treatment by the administration of a large dose of his panacea, which produced, of course, violent and long continued emesis, followed by a distressing hiccough, which harassed him until his death, an event which took place a few days afterward.

This result, so widely different from the expectations of the patient, and the prediction of the Doctor, led to the belief that Reed had been maltreated. And when charged by a prominent citizen with having hastened the fatal issue of the case, he rejoined, "that if he could obtain permission to make a post-mortem examination, he would demonstrate to the citizens of Croton that mercury had occasioned his death by developing an inflammation of the intestinal canal."

Such declarations were eminently calculated to inflame the public mind. They did so. He was present at the post-obit investigation, and admitted that he saw *structural lesions of the heart*, and that there was no evidence of *gastro-enteritis* having been present. The following is a condensed statement of the results of the examination:

Necroscopy twelve hours after death.

Rigor mortis was present. The body was somewhat, thought not greatly, emaciated. Upon inspection of the thorax, the left mammary region was visibly more prominent than the right. Upon the removal of the sternum we found the pericardium, *in situ naturali*, but greatly distended, which upon opening was observed to contain many ounces of bloody serum, completely inundating, so to speak, the heart. This organ, was evidently very greatly hypertrophied—judged by the rough, though usually correct, standard of Laennec, (*viz.* that the normal size of an individual's heart is the size of the fist,) it was enlarged to twice its natural bulk. Judged by the more accurate standard of weight and measurement, its hypertrophy was equally obvious. The minute and extensive researches of M. Bizot, in 1837, (*vide Mem. de la Societe Medicales d' Observation de Paris.*) teach the average weight of the normal heart, in males from 15 to 30 years, to be from 8 to 8¼ ounces, which is slightly greater than is estimated to be the case in the writings of M. Cruveilhier.

This specimen weighed 15½ ounces, although the hypertrophy was chiefly confined to its left side. The appearances of the right auricle and ventricle were perfectly natural, save perhaps, slight dilatation, and a discoloration from a slight extravasation of blood beneath the endocardium of the latter. Inspection of the left auricle and ventricle disclosed the most unequivocal marks of disease. The endocardium lining the ventricle, and especially in the vicinity of the valves, was of a bright inflammatory tint, and situate both upon the mitral and sigmoid valves, were depositions of plastic lymph, more or less firm. Some of these deposits were soft, and capable of being removed by the fingers; others were indurated and firmly attached, appearing to be somewhat ancient.

STOMACH AND INTESTINES—Healthy; not the least vestige of inflammation was to be observed.

LIVER—Of healthy appearance, but slightly enlarged.

SPLEEN—This organ exhibited evidences of having been the seat of an antecedent inflammation. It contained a small abscess, which was bounded superiorly, by what appeared to be a cartilaginous wall, of circular shape, of pearly whiteness, and "cried," to use the language of Percival Pott, speaking of scirrhus, "beneath the knife."

Want of time prevented an examination of the *encephalon*.

REMARKS—We have ever regarded diseases of the thoracic viscera, as being invested with peculiar interest, not more from the indispensable importance of the organs affected, constituting two props of the "tripod of life," as Borden happily has it,

than from the facility and accuracy with which we can diagnosticate them. It is only by careful reflection upon the circumstances, connected with such a case, as I have reported, that I can in any adequate degree realize the immense value of the researches of Laennec, as revealed in his "*Traite De L'Auscultation*," &c. which has shed such a brilliant flood of light upon diseases of the chest.

Than this case, I could conceive of none that would be more interesting to meet in practice, as strikingly illustrative of the great worth of physical diagnosis, and strongly confirmatory of some of the most important doctrines of modern Pathology.

Suffer me, briefly, to make allusion to some of the chief points of interest in the case.

In the first place, the patient was the subject of *repeated attacks of rheumatism*. No fact in modern Pathology is more interesting, important, or more abundantly established, than the frequent occurrence of Cardiac disease, in connection with acute rheumatism. Look at the result of the enquiries of Dr. P. M. Latham, in St. Bartholomew's Hospital, respecting this point. In the eighth lecture, of his little work on "Subjects connected with Clinical Medicine," whose high recommendation by Dr. Watson, I can most willingly endorse, he says, "as many as two-thirds of those who have acute rheumatism, also suffer inflammation of the heart." In Reed's case we firmly believe, that the first link in the chain of diseased action which led to his death, was acute rheumatism; that at sometime, a metastasis from some of the articulations to that "perpetually moving joint—the heart," occurred, and laid the foundation of his death.

Whenever this transference of diseased action does take place, both the *lining* and *investing* membranes of the heart are most frequently involved, hence *Rheumatic Carditis* comprises both *Peri* and *Endo Carditis*.

In the second place, I may mention the apoplectic fit. The frequent connection between apoplexy and hypertrophy of the heart, is well made out, indeed Dr. Hope's researches show, that they stand in nearly two-thirds of the cases, related to each other, as cause and effect. "Twenty-seven out of thirty-nine cases of apoplexy, occur in conjunction with enlargement of the heart."

In the case of Reed, all the indirect symptoms of Cardiac disease, were observable, videlicet, a peculiar condition of the mind; great dyspnoea, at times amounting to orthopnoea; biliary derangement, and anasarous infiltrations, &c., &c.

My own opinion, respecting the cause of death in this case, is this, that at Reed's last sickness, there was a renewal of inflammatory action about

the heart, the events of which, such as the enormous effusion in the heart case, &c., &c., were incompatible with the further continuance of life. It appears that no auscultatory examination of Reed's case was ever made, though I am confident—and nothing could have afforded me more unalloyed pride and satisfaction than to have heard it—that his heart, in every one of the "funeral marches it was beating to the grave," would have declared to an intelligent physician, in the most audible and intelligent language, the true nature of the difficulty under which it was laboring.

Before taking my departure from Croton, I took occasion to give the botanic physician some salutary advice—adverted to the unenviable predicament in which his ignorance had plunged him, and endeavored to inspire him with a love for scientific knowledge, by following the example *Le Maitre de Philosophie*, in a Comedie of the celebrated Moliere, in which he endeavors to impress the truth of the following sentiment upon the mind of Monsieur Jourdain, "*sans la science, la vie est presque une image de la mort*."* Whether I succeeded in convincing him of it, so readily as was the case with *Le Bourgeois gentilhomme*, the future must determine.

I have drawn up this hasty sketch of the above case for two prominent reasons, in the first place to present your readers with some additional testimony confirmatory of the frequent connection between arthritic and cardiac disease; and in the second place, to illustrate the great benefit often derivable from necroscopic examinations. The one is frequently overlooked, the other too sadly neglected.

COMMENTS

The author of this historic and interesting article, John Forrest Dillon, was born in the State of New York on December 25, 1831, coming with his parents to Davenport, Iowa, in July, 1838, when he was seven years of age. He began the study of medicine when about seventeen years of age in the office of Dr. E. S. Barrows at Davenport. In 1848 the Rock Island Medical College was formed and he attended one course of lectures there. The next year the college was removed to Davenport, where he attended a second course and was regularly graduated in the spring of 1850, at the age of 18 years and 4 months. He attended the organizational meeting of the Iowa State Medical Society at Burlington in June, 1850, and is listed as a charter member.

He was influenced by Professor John F. Sanford to locate for practice at Farmington, Van Buren county, a small place on the Des Moines river.

* "Without science, life is but the image of death."

When this article on Rheumatic Carditis—Autopsical Examination, was published, Doctor Dillon was still under nineteen years of age.

With only two short courses in a medical school, he had acquired an unusual knowledge of pathologic anatomy, and was evidently quite familiar with the French school of Bichat and Laennec. His reference to Laennec's work on auscultation is interesting.

Some of his expressions are classic. "No fact in modern pathology is more interesting, important, or more abundantly established, than the frequent occurrence of cardiac disease, in connection with acute rheumatism." "Rheumatic carditis comprises both peri and endocarditis."

The salutatory advice given by the young medico to the "botanic physician" is another bit of rare philosophy. His closing remarks about the great benefit of necropsy examination is equally applicable after the passing of eighty-two years. Because of an inguinal hernia, he was unable to ride horseback and for this reason he felt compelled to give up the practice of medicine. In the fall of 1850 he returned to Davenport, opened a small drug store and studied law. In 1852 he was admitted to the bar, and the same year elected prosecuting attorney of Scott county; practiced law until 1858 when he was elected Judge of the District Court, being re-elected four years later. In 1865 he was transferred to the Iowa Supreme Bench and re-elected six years later. In 1873 he was appointed by President Grant as Judge of the United States Circuit Court, which position he held until 1879, when he resigned to become professor of law in Columbia University at New York City, and assumed the position of general counsel for the Union Pacific Railroad Company.

In association with Dr. W. F. Peck he was one of the founders of the medical department of the State University at Iowa City, and from 1869 to 1879 was professor of medical jurisprudence in the medical and law departments of the University.

Walter L. Bierring,

OBITUARIES

DR. WILLIAM AUGUST PUCKNER

1864-1932

Resolutions

For a great many years Dr. Puckner has supplied state journals and special medical journals with abstracts from The Journal of the American Medical Association. These abstracts dealt particularly with the work of the Council on Pharmacy and Chemistry, the Bureau of Investigation, and later the Council on Physical Therapy and the Committee on Foods. Included also were epitomized comments of pertinent query and minor notes or editorials from The Journal. This work Dr. Puckner did in

addition to his tremendous burdens as Secretary of the Council.

Because of this peculiar relationship, therefore, The Journal of the Iowa State Medical Society regards it as a privilege to publish herewith the resolutions adopted on the death of Dr. Wm. A. Puckner by the Council on Pharmacy and Chemistry of the American Medical Association.

"The Council has unanimously adopted the following report of the Committee on Resolutions on the death of William August Puckner:

"William August Puckner was born February 24, 1864, at New Holstein, Wisconsin. He died in the Presbyterian Hospital, Chicago, October 1, 1932. He had been in failing health for a long time and in the hospital some ten weeks.

"The creation of the Council on Pharmacy and Chemistry was authorized by the Board of Trustees of the American Medical Association February 3, 1905; the first meeting of the newly created council was held at Pittsburgh some ten days later. Professor Puckner, one of the original members, attended that meeting and was active in formulating the principles on which the council has worked, as expressed in its official rules of procedure. One year later he became Secretary, a position of grave responsibility; he filled it well and faithfully for twenty-six years and seven months. Professor Puckner was well equipped for the position he had assumed. A graduate of the Chicago College of Pharmacy, now the Illinois School of Pharmacy, he later became Professor of Chemistry in that school. He took a course of chemistry at Harvard University and later studied at the University of Heidelberg. He received the honorary degrees of Doctor of Pharmacy, from the University of Pittsburgh, and Master of Pharmacy, from the Philadelphia School of Science. Doctor Puckner was an outstanding chemist and at the time of his appointment as Secretary of the council he had already won for himself an enviable reputation in the field of alkaloidal chemistry. He was a charter member of the Chicago section of the American Chemical Society and was elected chairman of that section in 1895. For some years Doctor Puckner was chief chemist for a pharmaceutical firm known as "Searle and Hereth" and this, added to his experience as professor in the school of pharmacy, gave him an intimate knowledge, from every angle, of the work he was undertaking. On accepting the secretaryship he, of course, gave up his connection with this firm. Doctor Puckner was endowed with an especially good memory which possibly became more acute when he became blind. If he were asked about a product that had been before the council months or years before, without referring to the bulletin or any other records, it was seldom that he was unable to give in detail every action taken that led to its acceptance or rejection. Under his direction, the weekly bulletin—the medium by which the council transacts its business—became a model of efficiency. But of much more importance in this council work was his personality, his attributes, his characteristics. While

occasionally he had to meet, personally, representatives of firms submitting products, he preferred wherever possible the more deliberate practice of correspondence. In this he exhibited tact, patience, resourcefulness, qualities that were absolutely necessary for a successful solution of the many problems that were continually coming up. In all such cases Doctor Puckner was able to see and appreciate the point of view of the other side, the manufacturer. When his eyes began failing and when he realized that the condition would inevitably result in blindness, Professor Puckner courageously prepared himself to face the handicap. He investigated the practicability of Braille's system for the blind and the typewriter; both of these he used. He kept in touch with current medical and chemical literature, both English and foreign, especially German, by having matter read to him, and in the case of important articles, recorded on the dictaphone for review at home; for his determination to overcome this disability compelled him to work at night as well as day. To those who knew him at his daily work, Doctor Puckner seemed to have dedicated his life to that which seemed nearest to his heart—the success of the Council and its efforts to advance scientific therapeutics. With patience in adversity, with sincerity of purpose, with conscientious devotion, he carried on. His heart was in his work. His life devoted to the cause he served.

"The council, individually and collectively, wish to express their high regard and affection for Professor Puckner as a friend and co-worker and admiration for the way he carried on, for his executive ability, for his efficiency in spite of handicap, for his loyalty. In his death, the council has lost a member of unique value; the medical profession a servant who unobtrusively served it faithfully for a quarter of a century."

FREDERICK A. ALDEN, M.D.
1878-1932

Dr. Frederick A. Alden was born in Abilene, Kansas, December 2, 1878. He was graduated in 1906 from the State University of Iowa College of Medicine and located at once in Highland Park, where he continued in the practice of medicine for twenty-six years. Dr. Alden helped to organize the Iowa Congregational Hospital and was a member of that staff until the hospital was taken over by the Iowa Lutheran Hospital. At the time of his death, he was a member of the active staffs of the Iowa Lutheran Hospital and the Broadlawns General Hospital, serving on the surgical staff of the latter hospital for a number of years. He was a member of the Des Moines Academy of Medicine and the Polk County Medical Society, Iowa State Medical Society, and the American Medical Association.

Dr. Alden was a direct descendant of John Alden and Priscilla Mullens, who came to America on the Mayflower. He was a member of the Park Board of the City of Des Moines, a member of the Gun Club, the Izaak Walton League, and the Presbyterian

Church. He was also a director of the Euclid Avenue Bank.

Dr. Alden died suddenly from a heart attack Friday, November 18, near Estherville, Iowa, while he was pheasant hunting. The doctor's friends and patrons taxed the capacity of Dunn's funeral home at his funeral November 21, 1932.

G. A. Huntoon, M.D.

CLARENCE WALDO HARNED, M.D., D.D.S.
1879-1932

We, at Broadlawns, have been associated with Dr. Harned in his charity work only. However, as a physician working among the poor gives the best index of his character, we feel that we have known this man as no others possibly could. He made himself a part of our institution. The citizens of Polk county cannot know and probably will never realize the service rendered to indigents of this community by Dr. Harned, the hundreds of hours he has spent on these unfortunates, both the deformed and the injured. It is probable that no recipient of public recognition for service rendered, has ever given a fractional part of the service that this remarkable man has contributed in his modest way. Any hour of day or night he always responded smilingly, courteously and eagerly to any call, be it for the victim of a drunken brawl or the victim of a traffic accident. His was at all times the same tender, thoughtful, skillful care—one of the highest types—a true son of Aesculapius.

Nor was his deep, sincere charity the least of his many virtues. This modest, smiling man was a truly great surgeon, an artist in his work, always a critic of his own efforts and results, a profound student, always eager to learn and to improve; always sorry that he was unable to do more for his patient.

Among his co-workers his slightest wish was the highest command, because it was for Dr. Harned. He was a perfect host within his own home, further adding to his multitude of friends and admirers.

It is a difficult task to be sufficiently brief when contemplating the life of this sterling man. Any one of his many virtues are exemplary, so

"I pray thee, then,
Write me as one that loves his fellow men."

The angel wrote, and vanished.
The next night,
It came again with a great
Awakening light.

And showed the names whom
Love of God had blessed,
And, lo! Ben Adhem's name
Led all the rest.

The Staff, Broadlawns Polk County Public Hospital.

HOWARD A. LANPHER, M.D., M.P.H.
1883-1932

Tributes of Appreciation

Dr. Howard A. Lanpher was born in Boston, Massachusetts, January 11, 1883. He was graduated

from Tufts College of Medicine and after serving in the World War was postgraduated from the Harvard School of Public Health. His private practice of medicine and further medical study fitted him for the specialty of epidemiology. He was epidemiologist for the State Department of Health of Connecticut for some time and came to Iowa in the same capacity in September, 1929. His untimely death occurred at the time of his greatest service to the public. He was energetic, a student, and had a happy smile of welcome for all. The many perplexing problems were met with courtesy, firmness and integrity. The personnel of the department will miss his presence and assistance; his place will be hard to fill. The doctor has gone but memories of him will linger. The world was made better by his having lived.

D. C. Steelsmith, M.D.

Treasured among our memories of those colleagues with whom it has been our lot to serve are many who become outstanding because of qualities not common to the group. The memory of Dr. Lanpher will necessarily assume a position of prominence among those of us who were privileged to know him sufficiently well to realize his tremendous earnestness, his unflinching loyalty, his untiring zeal, and his enthusiastic competency in maintaining the trust conferred upon him by his colleagues and the citizens of the state he served. One could not know him without admiring these qualities which not only rendered his own life sublime but dignified the entire profession of medical practice. In his death we have lost a worthy and admirable colleague.

R. R. Simmons, M.D.

In the few brief years since Doctor Lanpher came among us, he readily won our confidence and a way into the hearts of everyone with whom he came in contact. He had the soul and spirit of the true scientist. His wide knowledge of every phase of disease and its prevention gave to any subject that he discussed, a new interest. As an epidemiologist he conformed to the highest qualifications and his record of accomplishments will always occupy a bright page in the public health activities of Iowa. Sponsored by the late Dr. Henry Albert he caught the enthusiasm of the Master, and after that fatal day in April, 1930, dedicated his life and scientific endeavor to carry on the plans and purposes of Iowa's great Health Commissioner. He passed from the stage in the prime of life and at the threshold of still greater promise, yet in measure of work done and service for the betterment of human welfare, he fulfilled the achievement of a lifetime.

Walter L. Bierring, M.D.

Anyone conversant with the field of epidemiology must be impressed with the fact that a true epidemiologist is born, not made. A thorough medical training is essential in equipping him for his task but in the application of such knowledge there is required a combination of mental capacities and attitudes which is comparatively rarely found. This combination includes the investigative instinct, which

accepts with eagerness the challenge offered by the hidden and elusive paths of disease; the intuitive capacity through which certain individuals are able to leap across obstructions and pick up a trail at some unsuspected point; and a judicial attitude through which the intricate data may be appraised impartially. Judged by all of the standards, the late Dr. Howard A. Lanpher was a real epidemiologist. This is evident to anyone familiar with his work in the Connecticut and Iowa State Departments of Health. In a very considerable number of outbreaks which he was called upon to investigate, Dr. Lanpher quietly but with unerring instinct and accuracy exposed the source and indicated the measures whereby the disease in question could be controlled. Little publicity attended these efforts. In fact, very few of his reports were ever published. Yet few men in the state have rendered a more real and definite service to large groups of our people than did Dr. Lanpher during the few years in which he labored in Iowa. In his untimely death, the State Department of Health has lost a most gifted and valuable staff member, and the state has lost one of its most useful public servants.

Milford E. Barnes, M.D.

EVERETT C. WARD, M.D.

1876-1932

A Resolution

Be it resolved by the members of the Buchanan County Medical Society:

That we deplore the untimely demise of our fellow member and co-worker, Dr. E. C. Ward of Brandon;

That we appreciate his valued services and his devotion to duty as a physician in the community in which he has long resided;

That this resolution be forwarded to his bereaved family and a copy be spread upon the minutes of this society.

Passed by the Buchanan County Medical Society, November 19, 1932.

John Loeck, M.D., Secretary.

DR. CARL F. JORDAN APPOINTED STATE EPIDEMIOLOGIST

Dr. Carl F. Jordan of the State University of Iowa has been appointed to succeed the late Dr. Howard A. Lanpher as epidemiologist and director of preventable diseases in the State Health Department.

Dr. Jordan was formerly assistant professor of hygiene and preventive medicine in the College of Medicine and in addition, associate director of the University Department of Health. He received his medical degree from Johns Hopkins University School of Medicine in 1918, and has been connected with the State University since 1920, with the exception of the last two years, during which time he was granted an extended leave of absence from the university, in order to establish a county health unit working program in Burlington, Des Moines County, Iowa.

Dr. and Mrs. Jordan and their family have moved to Des Moines where Dr. Jordan will enter upon his new duties immediately.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- ***DR. COLWELL'S DAILY LOG FOR PHYSICIANS**—A Brief, Simple, Accurate Financial Record for the Physician's Desk.—Colwell Publishing Company, Champaign, Illinois.
- ***THE HEALING CULTS**—A Study of Sectarian Medical Practice; Its Extent, Causes and Control.—By Louis S. Reed, Ph.D.—(Publications of the Committee on the Costs of Medical Care: No. 16)—The University of Chicago Press, Chicago, 1932.—Price, \$2.00.
- ***AN INTRODUCTION TO DERMATOLOGY**—By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin.), Professor of Diseases of the Skin, University of Kansas School of Medicine, and Richard L. Sutton, Jr., A.M., M.D.—Visiting Dermatologist to the Kansas City General Hospital.—565 pages, with 183 illustrations.—The C. V. Mosby Company, St. Louis 1932.—Price, \$5.00.
- THE MEDICAL CLINICS OF NORTH AMERICA**.—New York Number, Vol. 15, Number 5, March, 1932. Published by W. B. Saunders Company, Philadelphia & London.
- MINOR SURGERY OF THE URINARY TRACT**—By Hermon C. Bumpus, Jr., Ph.B., M.D., M.S. in Urology, F.A.C.S., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation With a Chapter on Caruncles by John L. Crenshaw, M.D., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation; and a Chapter on Postoperative Care by Anson L. Clark, M.E., M.D., Section on Urology, the Mayo Clinic, Rochester, Minnesota. Octavo of 124 pages with 57 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$3.00 net.
- ***MODERN GENERAL ANESTHESIA**—James G. Poe, M.D., Second Edition, Completely Revised and Enlarged.—231 pages with 12 illustrations and 2 charts. F. A. Davis Company, Philadelphia, 1932.—Price, \$2.50.
- ***PAIN IN THE PLEURA, PERICARDIUM AND PERITONEUM**—A Clinical Study.—By Joseph A. Capps, M.D., Professor of Clinical Medicine, University of Chicago; with the collaboration of George H. Coleman, M.D., Assistant Professor of Medicine, Rush Medical College; a foreword by Anton J. Carlson, M.D., Ph.D., Chairman of the Department of Physiology, University of Chicago.—99 pages, illustrated.—The MacMillan Company, New York, 1932.—Price, \$3.00.
- PATHOLOGY FOR NURSES**—By Eugene G. Piette, M.D.—251 pages, with 65 illustrations.—F. A. Davis Company, Philadelphia, 1932.—Price, \$1.75.
- ***THE PRACTICAL MEDICINE SERIES—General Therapeutics**. Edited by Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, M.D., Instructor of Medicine, University of Illinois College of Medicine—Series of 1931—The Year Book Publishers, Inc., Chicago—Price, \$2.25.
- ***THE PRACTICAL MEDICINE SERIES—Neurology**. Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College.—*Psychiatry*, Edited by Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado Medical School.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, \$2.25.
- PSYLLIUM SEED: THE LATEST LAXATIVE**—By Dr. J. F. Montague, Medical Director Montague Hospital for Intestinal Ailments. 170 pages with 20 illustrations. Montague Hospital for Intestinal Ailments, New York City, 1932.
- SURGICAL CLINICS OF NORTH AMERICA**. (Issued serially one number every other month.) Volume 12, No. 3. (Lahey Clinic Number—June, 1932) 299 pages with 123 illustrations. Per clinic year (February, 1932, to December, 1932.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London. W. B. Saunders Company, 1932.
- ***THE TECHNIQUE OF THE NON-PADDED PLASTER CAST**—By Fritz Schneck, M.D., with a preface by Lorenz Bohler, M.D., Translated by Douglas D. Tofflemier, M.D., of Oakland, California. 169 illustrations. Vienna, Wilhelm Maudrich, Publisher, 1932. Price, cloth, \$5.00.
- ***TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA**—Third Series—Vol. 53.—317 pages, illustrated.—Printed for the College, in Philadelphia, 1931.
- THE WAY OF HEALTH INSURANCE**—By A. M. Simons and Nathan Sinai, D.P.H. Publications of the Committee on the Study of Dental Practice of the American Dental Association; No. 6. Published by The University of Chicago Press.—Price, \$2.00.

* Book Review in this issue.

BOOK REVIEWS

THE HEALING CULTS

A Study of Sectarian Medical Practice; Its Extent, Causes and Control. By Louis S. Reed, Ph.D. (Publications of the Committee on the Costs of Medical Care, No. 16). The University of Chicago Press, Chicago, 1932. Price, \$2.00.

With the exception of those who have ready access to statistical studies, few of us appreciate the enormous number of cult healers practicing in the United States, or the tremendous amount of money expended for their services. Dr. Reed, in this comprehensive report, covers the number, the geographic distribution, and the income of the practitioners of each of the various groups of drugless healers, and at the same time presents a sketch of the origins, past developments and present educational and legal status of the various sects.

To physicians the closing chapter of the volume will be of tremendous interest and value. In this section he discusses the causes for the existence of the healing cults and what may be done to protect the public against them. "Medical sects, therefore, exist in part because they provide a short cut for

those who lack time, money, or mental capacity to attain the qualifications demanded of the medical profession." "In so far as medical sectarianism can be controlled by law, that end can probably be best achieved through the medium of basic science laws."

AN INTRODUCTION TO DERMATOLOGY

By Richard L. Sutton, M.D., Sc.D., LL.D., F.R.S. (Edin.), Professor of Diseases of the Skin, University of Kansas School of Medicine, and Richard L. Sutton, Jr., A.M., M.D., Visiting Dermatologist to the Kansas City General Hospital. 565 pages, with 183 illustrations. The C. V. Mosby Company, St. Louis, 1932. Price, \$5.00.

All physicians familiar with the literature in the field of dermatology are equally familiar with the contributions which have been made to this science by the senior Dr. Sutton. His larger volume on skin diseases has been accepted as a standard work for both students and practitioners. In this newer volume intended primarily for students, the father and son have collaborated in sifting and condensing the essentials of dermatology into small compass so that

these essentials may be readily comprehended by the student.

In preparing the volume which will serve the medical student they have also prepared a volume which will prove of great value to the physician encountering a limited number of dermatologic conditions in his routine practice. The conditions commonly met are briefly described, and appropriate treatment outlined. The more advanced student is referred to the larger, unabridged treatises on this subject. The volume is generously illustrated.

MODERN GENERAL ANESTHESIA

James G. Poe, M.D. Second Edition, Completely Revised and Enlarged. 231 pages with 12 illustrations and 2 charts. F. A. Davis Company, Philadelphia, 1932. Price, \$2.50.

In preparing this volume on general anesthesia it has been the purpose of the author to present the essential knowledge of general anesthesia with brevity and practicability. Theoretical discussion has been omitted since it is assumed that the advance student in this field will make reference elsewhere in the literature for extended reading on debated points.

While the volume has been designed primarily as a textbook for medical students treating as it does the essentials of anesthesia, it will appeal to any physician or surgeon who administers anesthesia, or who employs the services of an anesthetist. The author has discussed the types and methods of general anesthesia including the preliminary examination in preparation of the patient. He has discussed the commoner anesthetic agents such as ether, nitrous oxide, ethylene, chloroform, ethyl chlorid and carbon dioxid. A closing chapter of the book is devoted to local anesthesia.

PAIN IN THE PLEURA, PERICARDIUM AND PERITONEUM

A Clinical Study. By Joseph A. Capps, M.D., Professor of Clinical Medicine, University of Chicago, with the collaboration of George H. Coleman, M.D., Assistant Professor of Medicine, Rush Medical College; a foreword by Anton J. Carlson, M. D., Ph.D., Chairman of the Department of Physiology, University of Chicago. 99 pages, illustrated. The Macmillan Company, New York, 1932. Price, \$3.00.

In appreciation of pain as the most common cause for man seeking medical aid, the authors of this volume have contributed largely to medical science. The studies reported in this monograph are of an unusual character, in so far as the method of approach to the problem is concerned. The authors have used the human subject as a medium for experimentation, recording observations made in the

course of the treatment and management of patients under their care.

In determining the sensitiveness of the organs of the chest they have brought pressure upon the viscera by means of a delicate wire introduced through the cannula or trocar used in draining the chest of serous effusion. In determining the sensibility of the abdominal viscera they have used a similar means of approach introducing pressure upon the organ through a trocar passed through the abdominal wall, usually for the purpose of draining ascites. Their observations are of unusual interest since they correlate clinical observations with anatomic facts and physiologic function.

It is particularly interesting to note that in the case of diaphragmatic stimulation the sensation of pain is frequently referred to the neck region; whereas, with other thoracic and abdominal organs or structures, the reference to pain is usually in the location of the site stimulated.

It has been said that the greatest advances in medicine are made through the intensive study of a single problem by an intelligent operator, and certainly contributions of the above nature will go far in clearing up many of the obscure problems of medical science.

THE PRACTICAL MEDICINE SERIES

General Therapeutics, Edited by Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, M.D., Instructor of Medicine, University of Illinois College of Medicine. Series of 1931. The Year Book Publishers, Inc., Chicago. Price, \$2.25.

It is of interest to note that during this period when the practice of medicine has undergone depression with the rest of the business world, advances in the field of general therapeutics have been even greater than in many more prosperous years. Endocrinology offers this time the most spectacular developments of the year. The use of adrenal cortex in the treatment of the heretofore hopeless Addison's disease is an outstanding contribution to medical science. The use of ovarian residue in the treatment of painful breasts, and the employment of anterior pituitary hormone in the testing of pregnancy, mark significant advances in the field of endocrinology.

It is interesting to note that the study of the vitamins has undergone extension until now their number has reached the letter D. Diphtheria toxoid appears to have become the preferred routine in immunization. Pyretotherapy, the artificial production of fever, by various means, is being generally tried with good results, not only in syphilis and parasymphilis, but also in "rheumatic" disturbances.

The 441 pages of this volume reflect not only the advances of the year in therapy, but summarize, in many instances, the present accepted therapy. The section on "Therapeutic Technic" alone is fully worth the price asked for this volume.

THE PRACTICAL MEDICINE SERIES

Neurology, Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College. *Psychiatry*, Edited by Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado Medical School. Series of 1931. The Year Book Publishers, Inc., Chicago. Price, \$2.25.

This year the editorial work of this volume has been divided since it has been felt that the ever increasing bulk of yearly literature makes it almost impossible for one editor to adequately cover the entire field. This year's neurologic literature has failed to confirm the hope raised last year that the cause of multiple sclerosis had been found. Several new types of encephalomyelitis, multiple neuritis, arachnitis, leptomenigitis and serum reactions are discussed in this volume. The etiology of the chief infectious diseases of the nervous system, encephalitis and poliomyelitis, remains unknown. More details regarding tumors and their manifestations in the nervous system are presented.

This volume will be of general interest to every physician and of especial interest to those physicians dealing particularly with the problems of neurology and psychiatry.

THE TECHNIQUE OF THE NON-PADDED PLASTER CAST

By Fritz Schnek, M.D., with a preface by Lorenz Bohler, M.D. Translated by Douglas D. Toffelmier, M.D., of Oakland, California. 169 illustrations. Vienna, Wilhelm Maudrich, Publisher, 1932. Price, cloth, \$5.00.

A review of this valuable book would not be complete without reference to the preface by Lorenz Bohler: "The treatment of any fracture has two constant requirements: good reduction and uninterrupted fixation until bony union takes place. The skill of the doctor is not usually taxed as much in the reduction of the fracture as in its maintenance in good position. In the majority of cases the non-padded cast affords the best means of maintaining the fragments in good position.

"During the past decade the plaster cast has been held responsible for many of the calamities of fracture treatment. In defending the use of a plaster cast one should take into consideration two factors: that many casts were applied to poorly reduced fractures and that faulty technic in the application permitted the fragments to slip, resulting in severe deformities. Today plaster of Paris is considered the best and cheapest material for splinting fractures because of its ease of application and stability. My friend and faithful co-worker, Dr. Schnek, deserves the thanks of doctors and patients for his able presentation of sound technic for the application of plaster casts."

This book is rather unusual and distinctive. The author gives in most minute detail the indications for and methods of applying the plaster cast to the different parts of the body. Complications and their

methods of treatment are all fully covered. The uses of the non-padded cast are extended to fields which ordinarily have not been considered suitable for the plaster casts. This method of treatment calls for attention to the most minute details and unless this is strictly followed, the widespread acceptance of the non-padded cast will tend to discredit the method which undoubtedly has just merit if properly used.

The only real contributions to our medical literature are exhaustive monographs such as this.

F. W. F.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Third Series. Vol. 53. 317 pages, illustrated. Printed for the College in Philadelphia, 1931.

It has been the established custom of the College of Physicians of Philadelphia to publish annually the papers presented before the college during the preceding year, together with the transactions of the college. These papers are listed as general papers, those presented to the section on ophthalmology, and those presented to the section on otology and laryngology. Outstanding in the first group are the symposium on Therapeutic Use and Abuse of Fluids, and the symposium covering The Past Five Years of Syphilologic Progress.

In the second group the papers of general interest are those dealing with The Syphilitic Conditions of the Optic Nerves, Lupus Erythematosus of the Conjunctiva and Eyelids, and the Ophthalmologic Importance of Focal Infective Prostatitis.

Of the papers presented to the section on otology and laryngology the one presenting The Indications for the Removal of the Tonsils and Adenoids, and a second presenting the Serious Complications Following Tonsillectomy, are perhaps most outstanding for consideration by the general practitioner.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS

A Brief, Simple, Accurate Financial Record for the Physician's Desk.—Colwell Publishing Company, Champaign, Illinois.

The 1933 edition of the Daily Log is essentially like its predecessors, both in its size and the scope of its usefulness. Its four hundred pages provide a separate page for each day of the year, with extra spaces for monthly and annual summaries, expense tables, special records, and incidental memoranda. The large size of the page provides sufficient room for the patient's name, the service rendered, and the necessary financial accounting accompanying the transaction. The book provides a full line each for thirty-two patients daily. The book serves the double purpose of an appointment book and ledger. The system of office record provided by the Daily Log is one of the simplest which has come to our attention and at the same time entirely adequate for every purpose. The system is built on a loose-leaf plan and durably bound in fabricoid.

